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OLIGO_NUC
Gapop 60.0 , Gapext 60.0
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ABS77821
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     Add89955 CpG oligo
Adj56900 CpG oligo
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Acd91394 Adjuvant-
Aaf99178 Immunosti
Abs77821 Anglogene
Abl38761 Immunosti
Acd9969 Immunosti
Add36680 Immunosti
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Add39672 Oligonucl
Aav83725 Plasmid p
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Adb36802 Immunosti
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AAF99300;

12-JUN-2001

(first entry)

Immunostimulatory nucleic acid #416.

AAF99300 standard; DNA; 32

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Aarsysue immunosti		_		Aaf98866 CpG immun	Aah50616 Cytokine	Aac87222 Immunosti	Aac87237 5'-amidat	Aac87234 Digoxigen	Aac87227 Methylate	Aac87233 Immunosti	Aac87231 5'-amidat	Aac87232 Immunosti	Aac87240 CpG oligo	Aaa93700 Unmethyla	Immunost	Aaa63598 Immune st	Aaa63586 Immune st	Aaa63588 Immune st		Aaa39265 CpG immun	Aaz47876 Immunosti	Aaz48012 Immune re	Aaz61001 Nucleotid	Aav74252 CpG-N mot

## ALIGNMENTS

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RESULT 1
AAF99300
ID AAF9
AC AAF9
AC AAF9
AC AAF9
XX 12-J
XX Immu
XW Vacc
KW immw
KW fung
KW infe
XX Synt
XX W020
XX Synt
XX Synt
XX Immu
XX W25-2
PN W25-2
PF 25-2
PF 25-2
PR 23-1
XX (IOW
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PA
                                                                                                                                                                                                                                                                                         Vaccinating against tumors, infectious diseases, allergies using immunostimulatory Py-rich and TG nucleic acids.
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27-SEP-1999; 99US-0156135P
23-AUG-2000; 2000US-0227436P
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The present invention relates to a method for stimulating an immune response. The method comprises administering an immunostimulatory nucleic acid to a non-rodent subject in sufficient quantity to stimulate an

The present sequence is one such

immunostimulatory

immune response.

Claim 101; Page 46; 338pp; English.

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RESULT 2
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ID ABS7
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The invention relates to inhibiting angiogenesis in a subject, comprising administering at least one antiangiogenic nucleic acid molecule. Also included is a kit comprising a first container housing the antiangiogenic nucleic acids, and instructions for administering them to a subject having a condition characterised by unwanted angiogenesis. The method is tumour metastasis, precancerous lesion, rheumatoid arthritis, psoriasis, diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, rubeosis, Osler-Webber Syndrome, myocardial angiogenesis, plaque neovascularisation, telangiectasia, haemophiliac joints, angiofibroma,
                                                                                                                                                                                                                                                                                                                                                                                         Inhibiting angiogenesis in a subject, involves administering antiangiogenic nucleic acid molecule to the subject.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Inhibiting
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The present invention relates to methods for treating or preventing CC cancer, involving administering to a subject having or at risk of CC developing cancer immunostimulatory nucleic acids that induce expression CC of cell surface antigens and antibodies. The methods are useful for CC treating or preventing cancer such as basal cell carcinoma, bladder CC cancer, bone cancer, brain and central nervous system (CNS) cancer, CC breast cancer, cervical cancer, colon and rectum cancer, connective CC tissue cancer, cesophageal cancer, eye cancer, Hodgkin's lymphoma, melanoma, myeloma, oral cavity cancer, laynamer, concective CC cancer, leukaemia, liver cancer, lung cancer, hodgkin's lymphoma, melanoma, myeloma, oral cavity cancer, ovarian CC cancer, stomach cancer, testicular cancer, rabdomyosarcoma, skin CC cancer, stomach cancer, testicular cancer, and uterine cancer. The present sequence is an immunostimulatory oligonucleotide described in the cemplification of the invention
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ID ABL3
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Matches
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                                                                                                                                                                                                                                                               Treating or preventing cancer, such as basal cell carcinoma, comprises administering immunostimulatory nucleic acids that induce expression o cell surface antigens and antibodies to a subject having or at risk of
                                                                                                                                                                                                                                  Disclosure;
                                                                                                                                                                                                                                                         developing cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cytostatic;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             phosphorothicate backbone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      atherosclerosis, scleroderma is an antiangiogenic nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      734.
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                                                                                                                                                                                                                                                                 opression of
at risk of
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RESULT 4
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PR (IRI)
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RESULT 5
ADB36802
ID ADB3
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 32 BP; 0 A; 5 C; 8 G; 19 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention describes a method of treating non-allergic inflammatory disease comprising administering to a subject having or at risk of developing a non-allergic inflammatory disease an immunostimulatory nucleic acid for prevention or treatment of the disease. The method is useful for treating non-allergic inflammatory diseases, such as psoriasis, eczema, allergic contact dermatitis, latex dermatitis or inflammatory bowel disease e.g., ulcerative colitis or Crohn's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Treating non-allergic inflammatory diseases, such as psoriasis, eczema, allergic contact dermatitis, latex dermatitis or inflammatory bowel disease by administering an immunostimulatory nucleic acid.
  ADB36802;
                                                    ADB36802 standard; DNA; 32 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 19; 229pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunostimulatory; antiinflammatory; dermatological; antipsoriatic; antiulcer; gene therapy; vaccine; non-allergic inflammatory disease psoriasis; eczema; allergic contact dermatitis; latex dermatitis; inflammatory bowel disease; ulcerative colitis; Crohn's disease; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2003-521815/49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Krieg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (KRIE/) KRIEG A M. (BERG/) BERG D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-MAR-2001; 2001US-0279642P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunostimulatory
                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence represents an immunostimulatory nucleic acid
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                                                                                                                                                                                                                                                                                                             32;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCGTCGTTTTGTCGTTTTGTCGTTTTGTCGTT 32
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                                                                                                                                                                                                                                                                                                          Conservative
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Pred. No. 1.1e-07;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                  Score 32; DB 9;
Pred. No. 1.1e-07;
                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                               Length 32;
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RESULT 6
ADD89955
ID ADD89756
AC ADD8

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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a method of treating or preventing allergy or asthma which comprises administering to a subject a poly-G nucleic acid in an aerosol formulation. The method and compositions of the present invention are useful for diagnosing and/or treating asthma and allergy especially in a hypo-responsive subject. The present sequence represents an immunostimulatory nucleic acid of the invention.
                                                        14-FEB-2002; 2002US-00076674.
31-JAN-2003; 2003US-00076674.
                                                                                                                                                                                                                                                                                                                                                                                                             CpG oligonucleotide used in immunostimulant complex
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                                                                                                                                       14-FEB-2003; 2003WO-US004711.
                                                                                                                                                                                            21-AUG-2003
                                                                                                                                                                                                                                                  WO2003068169-A2
                                                                                                                                                                                                                                                                                                                                                       Immunostimulant; vaccine; CpG; adjuvant;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treating and/or preventing allergy or asthma using an immunostimulatory nucleic acid alone or in combination with an asthma/allergy medicament.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-657977/62.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-FEB-2000; 2000US-0179991P
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  (UNBI-) UNITED BIOMEDICAL INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-DEC-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunostimulatory nucleic acid
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32; Conserv
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Pred. No. 1
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RESULT 7

ADJ55900

ID ADJ5

XX ADJ5

XX ADJ5

XX DG CPG

XX Immu

XX Immu

XX Horm

XX Horm

XX Horm

XX Synt

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Best Local S
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   Stabilized immunostimulatory complex useful for treating allergy, HI infection or prostate cancer, comprising cationic peptide immunogen
                                                                                                                                            WPI; 2004-212745/20.
                                                                                                                                                                                                                                                                                                                            14-FEB-2002; 2002US-00076674.
                                                                                                                                                                                                                                                                                                                                                                                      21-MAY-2003; 2003US-00355161.
                                                                                                                                                                                                                                                                        (SOKO/) SOKOLL K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2004009897-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunostimulatory complex; adjuvant; peptide immunogen stabiliser; water-in-oil emulsion; suspension; vaccine; prostate cancer; hormone ablation; allergy; HIV infection; foot-and-mouth disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CpG oligonucleotide, CpG1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADJ56900;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADJ56900 standard; DNA; 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 32 BP; 0 A; 5 C; 8 G; 19 T; 0 U; 0 Other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 10; SEQ ID NO 1; 159pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCGTCGTTTTGTCGTTTTGTCGTTTTGTCGTT 32
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32; Conserv
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Pred. No. 1.1e-07;
0; Mismatches 0;
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ACD91394
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Matches 32
                                                                                                            The invention relates to treating a subject infected with HIV comprising administering a CpG nucleic acid (e.g. an adjuvant type CpG oligonucleotide, an immunostimulatory CpG oligonucleotide or a B cell vaccines to treat a subject infected with HIV. The present sequence is ar adjuvant type CpG oligonucleotide
                                                                                      Sequence 27 BP; 0 A; 4 C; 6 G; 17 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                              15-JUL-1994;
07-FEB-1995;
08-OCT-1999;
                                                                                                                                                                                                                        Claim 50; Page 20; 22pp; English.
                                                                                                                                                                                                                                        Treating a subject infected with HIV by administering a CpG nucleic acid.
                                                                                                                                                                                                                                                                                      WPI; 2003-512356/48.
                                                                                                                                                                                                                                                                                                                        Krieg
                                                                                                                                                                                                                                                                                                                                             (IOWA ) UNIV IOWA RES
                                                                                                                                                                                                                                                                                                                                                                                                                               16-AUG-2001; 2001US-00931583.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2003050263-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CpG island; ss; HIV infection; gene therapy; vaccine; B-cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Adjuvant-type CpG containing oligonucleotide #3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACD91394 standard; DNA; 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACD91394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an immunostimulatory complex specifically adapted to act as adjuvant and as a peptide immunogen stabiliser. The invention is useful for preparing a water-in-oil emulsion, suspension vaccine. It is also useful for treating prostate cancer, hormone ablation, allergy, HIV infection, foot-and-mouth disease, etc. The present sequence is an oligonucleotide used in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 32 BP; 0 A; 5 C; 8 G; 19 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         anionic CpG oligonucleotide
                                                                                                                                                                                                                                                                                                                       AM.
                                                26;
                                                        Similarity
TCGTCGTTTTGTCGTTTTGTCGTTTT
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                                       .larity 100.0%; 1 Conservative 0;
                                                                                                                                                                                                                                                                                                                Klinman D,
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                                                                                                                                                                                                                                                                                                                                                                       94US-00276358.
95US-00386063.
99US-00415142.
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Conservative 0
                                                                      81.2%;
                                                                                                                                                                                                                                                                                                                                                FOUND.
                                                                                                                                                                                                                                                                                                               Steinberg AD;
                                  ; Score 26; DB;
%; Pred. No. 0.00
0; Mismatches
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Pred. No. 1.1e-07;
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                                                DB 9; L
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                                                          Length 27;
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Matches 26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-SEP-1999;
27-SEP-1999;
             ABS77821;
                                          ABS77821 standard;
                                                                                                                                                                                                                                               Sequence 29 BP; 0 A; 4 C; 6 G; 19 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vaccinating against tumors, infectious diseases, allergies and asthma using immunostimulatory Py-rich and TG nucleic acids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immunostimulatory; tumour; viral infection; bacterial infection; fungal infection; parasitic infection; cancer; asthma; infectious disease; allergy; immune deficiency; phosphorothioate;
                                                                                                                                                                                                                                                                             present sequence may have a phosphorothioate backbone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-273485/28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaccine; cytostatic; virucidal; bactericidal; fungicidal; anti-parasitic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunostimulatory nucleic acid #294.
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                                                                                                                                                                                      26;
                                                                                                                                                      Similarity
                                                                                                                                        TCGTCGTTTTGTCGTTTTGTCGTTTT
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                                                                                                                                                                                    Conservative
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                                          DNA;
                                                                                                                                                                            81.2%; 5u
100.0%; Pr
0;
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Pred. No.
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RESULT 11
ABL38761
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    administering at least one antianglogenic nucleic acid molecule. Also included is a kit comprising a first container housing the antianglogenic nucleic acids, and instructions for administering them to a subject having a condition characterised by unwanted anglogenesis. The method is useful for inhibiting anglogenesis associated with solid tumour growth, tumour metastasis, precancerous lesion, rheumatoid arthritis, psoriasis, diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, rubeosis, Osler-Webber Syndrome, mycoardial anglogenesis, plaque neovascularisation, telanglectasia, haemophiliac joints, angiotibroma, wound granulation, intestinal adhesions, atherosclerosis, scleroderma and hypertrophic scars. The present sequence is an antianglogenic nucleic
                Antibody-induced cell lysis; cancer; immunostimulatory; CD20; angiogenesis; metastasis; cytostatic; ss.
                                                                                                      16-APR-2002
                                                                                                                                         ABL38761
                                                                                                                                                                        ABL38761 standard; DNA; 29
                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 2; Page 25; 276pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inhibiting angiogenesis in a subject, involves administering at least one antiangiogenic nucleic acid molecule to the subject.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diabetic retinopathy; retinopathy of prematurity; macular degeneration; corneal graft rejection; neovascular glaucoma; retrolental fibroplasia; rubeosis; oSler-Webber Syndrome; myocardial angiogenesis; plaque neovascularisation; telangiectasia; haemophilac joint; plaque neovascularisation; intestinal adhesion; atherosclerosis; angiofibroma; wound granulation; intestinal adhesion; atherosclerosis;
                                                                   Immunostimulatory nucleic acid SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                           acid of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to inhibiting angiogenesis in a subject, comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-566690/60
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                                                                                                                                                                                                                                                                                                                                                    Similarity
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                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           precancerous lesion; rheumatoid arthritis; psoriasis;
                                                                                                  entry.
                                                                                                                                                                                                                                                                                                                                                 100.0%;
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                                                                                                                                                                                                                                                                                                                                                    Score 26; DB 6;
Pred. No. 0.0001
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RESULT 12
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                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to methods for treating or preventing cancer, involving administering to a subject having or at risk of cell surface antigens and antibodies. The methods are useful for treating or preventing cancer such as basal cell carcinoma, bladder cancer, bone cancer, brain and central nervous system (CNS) cancer, cervical cancer, colon and rectum cancer, CNS) cancer, ce cancer, oesophageal cancer, eye cancer, Hidney cancer, larynx cancer, pankaemia, liver cancer, laryn cancer, Hodgkin's lymphoma, melanoma, myeloma, oral cavity cancer, ovarian cancer, pancreatic cancer, prestate cancer, rhabdomyosarcoma, skin cancer, stomach cancer, testicular cancer, and uterine cancer. The cancer is an immunostimulatory oligonucleotide described in the
                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                              Matches
US2003050268-A1.
                              Immunostimulatory; antiinflammatory; dermatological; antipsoriatic; antiulcer; gene therapy; vaccine; non-allergic inflammatory disease; psoriasis; eczema; allergic contact dermatitis; latex dermatitis; inflammatory bowel disease; ulcerative colitis; Crohn's disease; ss.
                             Synthetic.
                                                                                                                                           25-SEP-2003
                                                                                                                                                                    ACD99609;
                                                                                                                Immunostimulatory
                                                                                                                                                                                     ACD99609 standard; DNA; 29
                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Treating or preventing cancer, such as basal cell carcinoma, comprises administering immunostimulatory nucleic acids that induce expression of cell surface antigens and antibodies to a subject having or at risk of developing cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Weiner G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (IOWA ) UNIV IOWA RES FOUND.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-JUN-2001; 2001WO-US020154.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200197843-A2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                              1 TCGTCGTTTTGTCGTTTTGTCGTTTT 26
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                                                                                                                                                                                                                                                                                                           26;
                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                         29 BP; 0
                                                                                                                                                                                                                                                                                                     81.2%;
ilarity 100.0%;
Conservative
                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hartmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 129; 312pp; English.
                                                                                                         nucleic acid #295.
                                                                                                                                                                                                                                                                                                                                            A; 4 C; 6 G; 19 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
/mod_ba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mod_base= OTHER
/note= "5' biotinylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                      ВÞ
                                                                                                                                                                                                                                                                                         Score 26; DB 6; Length 29; Pred. No. 0.00016; 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                 26
                                                                                                                                                                                                                                                                                         0,
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RESULT 13
ADB36680
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Treating and/or preventing allergy or asthma using an immunostimulatory nucleic acid alone or in combination with an asthma/allergy medicament.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                             WPI; 2003-657977/62.
                                                                                      (BRAT/) BRATZLER R L.
(PETE/) PETERSEN D M.
(FOUR/) FOURON Y.
                                                                                                                            03-FEB-2000; 2000US-0179991P
                                                                                                                                                02-FEB-2001; 2001US-00776479.
                                                                                                                                                                           08-MAY-2003
                                                                                                                                                                                                                         ds; allergy; asthma; poly-G nucleic acid; aerosol formulation;
hypo-responsive subject; immunostimulatory.
                                                                                                                                                                                             US2003087848-A1.
                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                               Immunostimulatory nucleic acid #294.
                                                                                                                                                                                                                                                                                          04-DEC-2003
                                                                                                                                                                                                                                                                                                               ADB36680;
                                                                                                                                                                                                                                                                                                                               ADB36680 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention describes a method of treating non-allergic inflammatory disease comprising administering to a subject having or at risk of developing a non-allergic inflammatory disease an immunostimulatory nucleic acid for prevention or treatment of the disease. The method is secretary eczema, allergic inflammatory diseases. The method is inflammatory bowel disease e.g., ulceratitis, latex dermatitis or This sequence represents an immunostimulatory nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 29 BP; 0 A; 4 C; 6 G; 19 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Treating non-allergic inflammatory diseases, such as psoriasis, eczi
allergic contact dermatitis, latex dermatitis or inflammatory bowel
disease by administering an immunostimulatory nucleic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 16; 229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-521815/49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-MAR-2001; 2001US-0279642P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-MAR-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-MAR-2003.
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(BERG/) BERG D J.
                                                                    RL,
                                                                                                                                                                                                                                                                                                                                                                                       μ
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                                                                                                                                                                                                                                                                                                                                                                                                                               26;
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                                                                 Petersen
                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                    81.2%;
100.0%; Pr
                                                                 DM.
                                                                                                                                                                                                                                                                                                                                29
                                                              Fouron
                                                                                                                                                                                                                                                                                                                               BP
                                                                                                                                                                                                                                                                                                                                                                                                                      Score 26; DB; Pred. No. 0.0
                                                                                                                                                                                                                                                                                                                                                                                26
                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                 0.00016;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 29;
                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                   <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                eczema,
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Disclosure; Page

9

221pp; English.

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ARESULT 14
ADE39 40729
ID ADE39
AC CANCE
AND CANCE
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Best Local S
Matches 26
The present invention describes a cancer vaccine (1), which comprises lipid-nucleic acid (LNA) formulation in combination with at least one tumour-associated antigen that is mixed with or associated with the LN formulation comprising a lipid component having at least one cationic lipid, and a nucleic acid component comprising at least one
                                                                                                                                                                                                                                              New cancer vaccine having a lipid-nucleic acid formulation in combination with at least one tumor-associated antigen, useful for stimulating enhanced responses against tumor-associated antigens and for inhibiting
                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-011992/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-MAY-2002; 2002US-0379343P.
07-NOV-2002; 2002US-00290545.
04-APR-2003; 2003US-0460646P.
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                                                                                                                                                                   Example 9; SEQ ID NO 7; 119pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (INEX-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-MAY-2003; 2003WO-CA000679
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tumour growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cancer; vaccine; lipid-nucleic acid; LNA; tumour-associated antigen;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INEX PHARM CORP.
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                                                                                                                                                                                                                                                                                                                                                                                                                          Semple S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP, 0 A;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nune response; cytostatic; gene therapy;
inhibition; tumour; human; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mod_base= OTHER
/note= "optionally phosphorothioate linkages and
methylated cytosine residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ODN 7 (INX-2006)
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                                                                                                                                                                                                                                                                                                                                                                                                                          Klimuk
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Pred. No
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
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RESULT 15
AAV83725
ID WAV83
XX AAV83
XX AAV83
XX CPG-NA
CPG-N
XX CPG-N
PD 26-NC
XX CPG-N
PD 26-NC
XX CPG-N
PD 26-NC
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Best Local S
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This sequence is used in the description of a method for enhancing the immunostimulatory effect of an antigen encoded by nucleic acid contained in a nucleic acid construct. The method involves determining the CpG-N and CpG-S motifs present in the construct, removing neutralising CpG (CpG-N) motifs and optionally inserting stimulatory CpG (CpG-S) motifs in the construct, thereby producing a nucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a parasite. They can also be used for expression of a therapeutic polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines, apoptotic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   oligonucleotide, where the vaccine is capable of stimulating a Th-1 ba immune response in vivo to the at least one tumour-associated antigen.

(I) has cytostatic activity, and can be used in vaccines, and in gene therapy. The methods and compositions of the present invention can be used for stimulating enhanced responses against tumour-associated antigens and for inhibiting tumour growth. The present sequence represents an oligonucleotide which is used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                             Use of neutralising CpG and stimulating CpG motifs in DNA vectors enhancing the immunostimulatory effect of an antigen or enhancing expression of a therapeutic polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                             Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-059712/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Davis
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20-MAY-1997;
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15-MAR-1999
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(IOWA) UNIV IOWA RES
(QIAG-) QIAGEN GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9852581-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HL,
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                                                                                                                                                                                                                                                                                                                                                                                             Page 41, 109pp;
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97US-0047233P
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Pred. No.
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р Q Search completed: February 14, 2005, 06:52:40 Job time : 298 secs Query Match
78.1%; Score 25; DB 2; Length 52;
Best Local Similarity 100.0%; Pred. No. 0.0005;
Matches 25; Conservative 0; Mismatches 0; Indels Sequence 52 BP; 1 A; 9 C; 14 G; 28 T; 0 U; 0 Other; correct PA field.) 0; Gaps 0;

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Database :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Word size :
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Perfect score:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                           Published Applications NA:*

1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*
5: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
6: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
7: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
9: /cgn2_6/ptodata/2/pubpna/US09_PUBCOMB.seq:*
10: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
11: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
13: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
14: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
15: /cgn2_6/ptodata/2/pubpna/US108_PUBCOMB.seq:*
16: /cgn2_6/ptodata/2/pubpna/US108_PUBCOMB.seq:*
17: /cgn2_6/ptodata/2/pubpna/US10C_PUBCOMB.seq:*
18: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*
19: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*
19: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*
19: /cgn2_6/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
20: /cgn2_6/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
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21: /cgn2_6/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
22: /cgn2_6/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
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25: /cgn2_6/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
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Gapop 60.0 , Gapext 60.0
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Copyright (c) 1993 - 2005 Compugen Ltd.
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ALIGNMENTS

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6	US-09-888-326-131/	US-09-931-583-35	US-10-831-778-429	US-10-355-161A-1-7	US-10-314-578-42	US-10-076-674-1-	US-10-017-995-429	US-10-112-653-411	US-09-776-479-429	US-09-776-479-429	US-09-888-326-734	ID O	SUMMARIES
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Gaps

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12
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96	96	e 96	e 41	e 41	e 35	e 30	e 27	e 26	e 24	e 14	e 68	e 36	e 29	73	Sequence 732, App	73	e 73	e 73	e 23	e 147	77,	e 77,	e 77,	e 90,	4	4	e 1:	e 3(	e 3(	e 3(	equence	e 3(	Sequence 305, App

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTTTTGTCGTT 32	Query Match 100.0%; S Best Local Similarity 100.0%; F Matches 32; Conservative 0;	OTHER INFORMATION: phosphorothicate backbone US-09-888-326-734	NAME/KEY: misc_feature	; FEATURE:	; ORGANISM: Artificial Sequence	; TYPE: DNA	; SEQ LU NO /34	; SOFTWARE: FastSEQ for Windows Version 3.0	; NUMBER OF SEQ ID NOS: 848	; PRIOR FILING DATE: 2000-06-22	; PRIOR APPLICATION NUMBER: US 60/213,346	; CURRENT FILING DATE: 2001-06-22	; CURRENT APPLICATION NUMBER: US/09/888,326	; TITLE OF INVENTION: Cell Lysis	; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced	; APPLICANT: Hartmann, Gunther	; APPLICANT: Weiner, George	; GENERAL INFORMATION:	; Publication No. US20030026801A1	; Sequence 734, Application US/09888326	US-09-888-326-734	VEROUT T
TICGIT 32	Score 32; DB 10; Length 32; Pred. No. 1.1e-07; Mismatches 0; Indels 0;	oackbone		-leotide				3.0			46		, 326	and Treating Cancer	cing Antibody-Induced							

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RESULT 4
US-10-112-653-411
Caquence 411, Ag
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APPLICANT: Petersen, Deanna M.
ITILE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the FILE REFERENCE: C1037/7013 (HCL/MAT)
CURRENT APPLICATION NUMBER: US(09)776,479
PRIOR APPLICATION NUMBER: US(09)776,479
PRIOR APPLICATION NUMBER: US(01-02-02)
PRIOR FILING DATE: 2001-02-02
PRIOR FILING DATE: 2000-02-03
INUMBER OF SEQ ID NOS: 1093
SEQ ID NO 429
INENDRE: PASESEQ for Windows Version 3.0

    TYPE: DNA
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Synthetic Sequence
    US-09-776-479-429

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Best Local S
                                                                                                                                                                                                                                                                                                                                                                Matches
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APPLICANT: Poterser, Deanna M.

ITILE OF INVENTION: Immunostimulatory Nucleic Acids for the FILE REFERENCE: C1037/7013 (HCL/MAT)

CURRENT APPLICATION NUMBER: US/09/776,479

PRIOR APPLICATION NUMBER: US/09/776,479

PRIOR PILING DATE: 2001-02-02

PRIOR PILING DATE: 2000-02-03

SOFTWARE: FASTSEQ for Windows Version 3.0

LENGTH: 32

TYPE: Day

PRIOR PASTSEQ for Windows Version 3.0
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Publication No. US20040067902A9
GENERAL INFORWATION:
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OTHER INFORMATION: Synthetic Sequence
US-09-776-479-429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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US-09-776-479-429
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 429, Application No. US20/
GENERAL INFORMATION:
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                                                                                                                                                                                                         1 TCGTCGTTTTGTCGTTTTGTCGTTTTGTCGTT 32
                                                                                                                                                                                                                                                                                                                         32; Conservative
Application US/10112653
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0. US20030087848A1
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                                                                                                                                                                                                                                                                                              100.0%; Score 32; DB 11; 100.0%; Pred. No. 1.1e-07; tive 0; Mismatches 0;
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Pred. No. 1.1e~07;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                    Length 32;
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RESULT 6
US-10-076-674-1
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                                                                                                            Sequence 1, Application US/10076674
Publication No. US20030165478A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Synthetic Sequence US-10-017-995-429
APPLICANT: Sokoll, Kenneth K.
TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
FILE REFERENCE: Immunogen Delivery System
CURRENT APPLICATION NUMBER: US/10/076,674
NUMBER OF SEQ ID NOS: 11
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Matches
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Best Local S
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APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR
TITLE OF INVENTION: TRAITMENT OF NON-ALLERGIC INFLAMMATORY DISEASES
CURRENT APPLICATION NUMBER: US/10/112,653
CURRENT FILING DATE: 2002-03-29
PRIOR APPLICATION NUMBER: US 60/279,642
NUMBER OF SEQ ID NOS: 1040
SOPTWARE: FASTSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/255,534
NUMBER OF SEQ ID NOS: 1093
SEQ ID NO 429
LENGTH: 32
TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Bratzler, Robert L.
TITLE OF INVENTION: Inhibition of Anglogenesis by Nucleic Acids
FILE REFERENCE: C1037/7025 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/10/017,995
CURRENT FILING DATE: 2001-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic Oligonucleotide
US-10-112-653-411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Publication No.
                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Artificial Sequence FEATURE:
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Best Local !
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TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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                                                                                                                                                                                                                                    1 TCGTCGTTTTGTCGTTTTGTCGTTTTGTCGTT 32
                                                                                                                                                                                                                                                                  h 100.0%; Score 32; DB 14; Length 32; Similarity 100.0%; Pred. No. 1.1e-07; 32; Conservative 0; Mismatches 0; Indels
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o. US20030055014A1
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Pred. No. 1.1e-07;
Mismatches 0;
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US-10-355-161A-1
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SOFTWARE: PASCSEQ for Windows Version 3.0
SEQ ID NO 429
LENGTH: 32
TYPE
                                                                                                                                                                                              Sequence 1, Application US/10355161A

Publication No. US20040009897A1

GENERAL INFORMATION:
APPLICANT: Sokoll, Kenneth K.
TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
                                     NUMBER OF SEQ ID NOS: 13
SOFTWARE: PAtentin version 3.1
SEQ ID NO 1
LENGTH: 32
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LENGTH: 32
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                                                                                                PRIOR APPLICATION NUMBER: US 10/076674 PRIOR FILING DATE: 2002-02-14 NUMBER OF CENTRAL PRIOR FILING DATE: 2002-02-14
                                                                                                                                                   FILE REFERENCE: Immunogen Delivery System CURRENT APPLICATION NUMBER: US/10/355,161A CURRENT FILING DATE: 2003-01-31
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PRIOR PILING DATE: 1999-09-27
PRIOR APPLICATION NUMBER: US 60/227,436
PRIOR FILING DATE: 2000-08-23
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APPLICANT: Vollmer, Jorg
TITLE OF INVENTION: Immunostimulatory Nucleic Acids
FILE REFERENCE: C1039/7035 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/10/314,578
CURRENT FILING DATE: 2002-12-09
PRIOR APPLICATION NUMBER: US 60/156,113
PRIOR APPLICATION NUMBER: US 60/156,113
PRIOR FILING DATE: 1999-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Krieg, Arthur M. APPLICANT: Schetter, Chris APPLICANT: Vollmer, Jorg
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ORGANISM: Artificial Sequence
FEATURE:
ORGANISM: Artificial Sequence
                     TYPE: DNA
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Pred. No. 1.1e-07;
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US-09-931-583-35
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                                                                                                                       APPLICANT: Steinberg, Alfred
Title OF INVENTION: Methods and Products for Treating HIV Infection
FILE REFERENCE: C(1039/7053 (HCL))
CURRENT APPLICATION NUMBER: US/09/931,583
CURRENT FILING DATE: 2001-08-16
PRIOR APPLICATION NUMBER: US 08/276,358
PRIOR FILING DATE: 1994-07-15
PRIOR APPLICATION NUMBER: US 09/415,142
PRIOR FILING DATE: 1999-10-09
NUMBER OF SEQ ID NOS: 75
SOFTWARE: Patentin version 3.0
SEQ ID NO 35
SOFTWARE: Patentin version 3.0
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TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the
TITLE OF INVENTION: Treatment of Asthma and Allergy
FILE REFERENCE: C1037/7013 (HCL/MAT)
CURRENT PILLIG DATE: 2004-04-23
PRIOR APPLICATION NUMBER: US 60/179,991
PRIOR APPLICATION NUMBER: US 60/179,991
PRIOR FILING DATE: 2000-02-03
NUMBER OF SEQ ID NOS: 1093
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 429
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Best Local Similarity
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GENERAL INFORMATION
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APPLICANT: Klinman, Dennis
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APPLICANT: Petersen, Deanna M
APPLICANT: Fouron, Yves
                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
                NAME/KEY: misc_feature
OTHER INFORMATION: Synt
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                                                          FEATURE:
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                                                                                                                     LENGTH:
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                  Synthetic Oligonucleotide
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Pred. No. 1.1e-07;
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Pred. No. 1.1e-07;
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Length 29; Indels

0;

Gaps

0

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APPLICANT: Petersen, Deanna M.

APPLICANT: Petersen, Deanna M.

APPLICANT: Petersen, Deanna M.

APPLICANT: Petersen, Deanna M.

ITILE OF INVENTION: Immunostimulatory Nucleic Acids for the ITILE OF INVENTION: Treatment of Asthma and Allergy CURRENT APPLICATION NUMBER: US/09/776,479

CURRENT APPLICATION NUMBER: US/09/776,479

PRIOR APPLICATION NUMBER: US/09/776,479

PRIOR APPLICATION NUMBER: US/09/776,479

PRIOR FILING DATE: 2001-02-02

PRIOR APPLICATION NUMBER: US/09/179,991

NUMBER OF SEQ ID NOS: 1093

SOFTMARE: PastSEQ for Windows Version 3.0

LENGTH: 29

TYPE: DNA

ORGANISM: Artificial Sequence
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US-09-776-479-305
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GENERAL INFORMATION:
APPLICANT: Weiner, George
APPLICANT: Weiner, George
ITITLE OF INVENTION: Methods for Enhancing Antibody-Induced
FILE REFERENCE: C1039/7052 (AWS)
CURRENT APPLICATION NUMBER: US/09/888,326
FRIOR APPLICATION NUMBER: US/09/888,326
PRIOR FILING DATE: 2001-06-22
NUMBER OF SEQ ID NOS: 048
SOFTWARE: FASTSEQ for Windows Version 3.0
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Best Local S
Matches 26
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Publication No. US20030087848A1
GENERAL INFORMATION:
                              NAME/KEY: misc feature LOCATION: (1)...(3)
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NAME/KEY: misc_feature
LOCATION: (0):..(0)
OTHER INFORMATION: chimeric phosphorothioate/phosphodiester backbone
OTHER INFORMATION: with phosphodiester on 5' end
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TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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26; Conservative
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o. US20030026801A1
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100.0%; Pred. No. 0.00016;
tive 0; Mismatches 0;
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, Pred. No. 0.00016;
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APPLICANT: Petersen, Deanna M.

APPLICANT: Petersen, Deanna M.

APPLICANT: Pouron, Yees

TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: Treatment of Asthma and Allergy

CURRENT APPLICATION NUMBER: US/09/776,479

CURRENT FILING DATE: 2001-02-02

PRIOR APPLICATION NUMBER: US 60/179,991

PRIOR APPLICATION NUMBER: US 60/179,991

PRIOR FILING DATE: 2000-02-03

SOPTWARE: FastSEQ for Windows Version 3.0

LENGTH: 29

LENGTH: 29
                                                                                                                                                                                                                                                                                  RESULT 14
US-10-112-653-295
I Sequence 295, Application US/10112653
Publication No. US20030050268A1
GENERAL INFORMATION:
                                                          NUMBER OF SEQ ID NOS: 1040
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-776-479-305
                                                                                                              CURRENT APPLICATION NUMBER: US/10/112,653
CURRENT FILING DATE: 2002-03-29
PRIOR APPLICATION NUMBER: US 60/279,642
PRIOR FILING DATE: 2001-03-29
                                                                                                                                                                                     APPLICANT: Krieg, Arthur M.
APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC A
TITLE OF INVENTION: TREATMENT OF NON-ALLERGIC
FILE REFERENCE: CO1039/70060 (AMS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
US-09-776-479-305
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Best Local :
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        TYPE: DNA
ORGANISM: Artificial Sequence
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FEATURE:
                                                      ENGTH:
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Publication No. US20
GENERAL INFORMATION:
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Best Local S
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ORGANISM: Artificial Sequence
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)...(3)
OTHER INFORMATION: Conjugated to biotin moiety.
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OTHER INFORMATION: Synthetic Sequence
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100.0%; Pred. No.
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C INFLAMMATORY DISEASES
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Indels

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Gaps

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Sequence 305, Application US/10017995
Publication No. US20030055014A1
GENERAL INFORMATION:
APPLICANT: Bratzler, Robert L.
TITLE OF INVENTION: Inhibition of Angiogenesis by Nucleic Acids
FILE REFERENCE: C1037/7025 (HCL/MAT)
CURRENT PRILING DATE: 2001-12-18
PRIOR APPLICATION NUMBER: US/60/255,534
PRIOR PELING DATE: 2000-12-14
NUMBER OF SEQ ID NOS: 1093
SOFTWARE: FASTURE: PASTSEQ for Windows Version 3.0
SEQ ID NO 305
CORGANISM: Artificial Sequence
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)...(3)
COTHER INFORMATION: Conjugated to biotin moiety.
US-10-017-995-305
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Search completed: February 14, 2005, 09:34:33 Job time : 303 secs
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US-10-017-995-305
                                                                                                                                                                                   Query Match 81.2%; Score 26; DB 14; Best Local Similarity 100.0%; Pred. No. 0.00016; Matches 26; Conservative 0; Mismatches 0;
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         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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32
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1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
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       GenCore version (c) 1993 - 2005
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US-09-965-101-15
US-09-965-098-90
US-09-286-098-90
US-08-649B-3
US-09-082-649B-3
US-09-082-649B-3
US-09-082-649B-6
US-09-191-170-84
US-09-191-170-84
US-09-191-170-95
US-09-191-170-95
US-09-191-170-96
US-09-337-619-46
US-09-965-101-66
US-09-355-101-66
US-09-355-101-67
US-09-082-649B-67
US-09-082-649B-67
US-09-191-170-85
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                                                                                       Sequence 15, Appl Sequence 6, Appli Sequence 6, Appli Sequence 3, Appli Sequence 3, Appli Sequence 66, Appli Sequence 84, Appli Sequence 84, Appli Sequence 46, Appli Sequence 46, Appli Sequence 12, Appli Sequence 12, Appli Sequence 13, Appli Sequence 13, Appli Sequence 14, Appli Sequence 17, Appli Sequence 18, Appli Sequence 19, Appli Sequence 19, Appli Sequence 91, Appli
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127, App
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FastSEQ for Windows Version 3.0

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99082649B  and Methods for Immunization of the Protocols  US/09/082,649B	ALIGNMENTS	PCT-US94-04190-22	US-08-312-648-22	US-08-049-473-22	US-08-062-023-21	US-08-495-741-21	US-08-495-739-21	US-08-495-743-21	US-09-648-040-3	US-09-502-344-29 .	US-09-143-190-29	US-08-469-609A-29	US-08-409-442A-29	US-08-412-110-29	US-07-714-131C-29	US-07-931-473B-29	US-09-086-118-6	US-09-359-753A-21	US-09-359-753A-20	
ion or		22,	22,	22,	21,	21,	21,	21,	3, ,	29,	29,	29,	29,	29,	29,	29,	6, 2	Sequence 21, Appl	Sequence 20, Appl	

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         GENERAL INFORMATION:
APPLICANT: Davis, Heather L.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schorr, Joachim
APPLICANT: Schorr, Joachim
APPLICANT: ML, Tong
TITLE OF INVENTION: Vectors and Methods for
TITLE OF INVENTION: Therapeutic Protocols
FILE REFERENCE: C1039/7057 (HCL/MAT)
                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                 Sequence 15, Application US/09965101
Patent No. 6821957
                                                                                                                                                                                                                                                  Matches
CURRENT APPLICATION NUMBER: US/09/965,101
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                                         Immunization
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APPLICANT: Krieg, Arthu. ".

APPLICANT: Schwartz, David A.

TITLE OF INVENTION: USE OF NUCLEIC ACIDS CONTAINING

TITLE OF INVENTION: UNMERHYLATED CPG DINUCLEOTIDE IN THE TREATMENT OF

FILE REFERENCE: C1039/7011

CURRENT APPLICATION NUMBER: U9/09/030,701B

PRIOR APPLICATION NUMBER: 1998-02-25

PRIOR APPLICATION NUMBER: 60/039,405

NUMBER OF SEQ ID NOS: 65

SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                          RESULT 4
US-09-286-098-90
, Sequence 90, Application US/09286098
marent No. 6218371
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating to INVENTION: Immune System Using Immunotherapeutic FILE REFERENCE: Clos9/7026/HCL
CURRENT APPLICATION UNMERR: US/09/286,098
CURRENT FILING DATE: 1999-04-02
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                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FASTSEQ for Windows
SEQ ID NO 6
LENGTH: 24
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Synthetic oligonucleotide US-09-030-701-6
                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 24
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Patent No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT FILING DATE: 2001-09-26
PRIOR APPLICATION NUMBER: US 09/082,649
PRIOR TILING DATE: 1998-05-20
PRIOR APPLICATION NUMBER: US 60/047,233
PRIOR PILING DATE: 1997-05-20
PRIOR APPLICATION NUMBER: US 60/047,209
PRIOR FILING DATE: 1997-05-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
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SEQ ID NO 15

LENGTH: 52

TYPE: DNA

ORGANISM: Artificial Sequence

FEATURE:
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les 25; Conserv
                                                                                                                                                                                                                                                                                          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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5. 6214806
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100.08;
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Pred. No. 0.00012;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                        Length 24;
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c Oligonucleotides
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; TOPOLOGY: 1; ; MOLECULE TYPE: US-08-960-774-46
                                                                  Matches
                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO. SEQUENCE CHARACTERISTICS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-960-774-46
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                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S. Serial No. 6239116 08/738,652
FILING DATE: October 30, 1996
ATTORNEY AGENT INFORMATION:
NAME: Haile, Lisa A.
REGISTRATION NUMBER: 08918/012001
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619/678-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 46, Application US/08960774 Patent No. 6239116
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EARLIER FILING DATE: 1998-04-03
NUMBER OF SEQ ID NOS: 105
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 90
LENGTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                  SOFTMARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 30-Octobe
                                                                                                                                                       LENGTH: 24 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMDAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: La Jolla
STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Krieg et al.,
TITLE OF INVENTION: IMMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 24
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: PC
SOFTWARE: ASCII text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Fish & Richardson P.C.
STREET: 4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local b. 24;
                                                                 24;
                    TCGTCGTTTTGTCGTTTTGTCGTT 24
TCGTCGTTTTGTCGTTTTGTCGTT 24
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                                                            Conservative
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30-October-1997
                                                                       75.0%;
100.0%;
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                                                   ; Score 24; DB;
%; Pred. No. 0.00
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                                                 0.00042;
thes 0;
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                                           Gaps
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US-09-082-649B-3

Query Match

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APPLICANT: Davis, Heather L.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schorr, Joachim
APPLICANT: Wu, Tong
TITLE OF INVENTION: Vectors and Methods for Immunization or
TITLE OF INVENTION: Therapeutic Protocols
FILE REFERENCE: C1039/7009
CURRENT APPLICATION NUMBER: US/09/082,649B
CURRENT FILING DATE: 1998-05-20
FRIOR APPLICATION NUMBER: US 60/047,233
FRIOR FILING DATE: 1997-05-20
FRIOR APPLICATION NUMBER: US 60/047,209
FRIOR FILING DATE: 1997-05-20
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                                                                                                                                                               SEQ ID NO 66
LENGTH: 24
TYPE: DNA
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Matches
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LENGTH: 24
TYPE: DNA
ORGANISM: Artificial Sequence
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APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/082,649B
CURRENT FILING DATE: 1998-05-20
PRIOR APPLICATION NUMBER: US 60/047,233
PRIOR FILING DATE: 1997-05-20
FEATURE:
OTHER INFORMATION: synthetic oligonucleotide
NAME/KEY: misc_feature
LOCATION: (0)...(0)
OTHER INFORMATION: Backbone is a phosphorothioate--phosphodiester
OTHER INFORMATION: chimera.
                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 60/047,209
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 85
SOFTWARE: PastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Wu, Tong
TITLE OF INVENTION: Vectors and Methods for Immunization
TITLE OF INVENTION: Therapeutic Protocols
FILE REFERENCE: C1039/7009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 85
SOFTWARE: FastSEQ for Windows Version 3.0
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                                                                                                                                           ORGANISM: Artificial Sequence
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o. 6339068
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Krieg, Arthur M.
Schorr, Joachim
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JMBER: US 60/047,233
1997-05-20
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100.0%; P
ative 0;
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Pred. No. 0.0004
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hes 0;
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SOFTWARE: FRANCISEQ for
SEQ ID NO 77
LENGTH: 24
TYPE: DNA
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                                                                                                                           CURRENT APPLICATION NUMBER: US/09/191,170
CURRENT FILING DATE: 1998-11-13
EARLIER APPLICATION NUMBER: US 08/960,774
EARLIER FILING DATE: 1997-10-30
EARLIER APPLICATION NUMBER: US 08/738,652
EARLIER FILING DATE: 1996-10-30
EARLIER FILING DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/276,358
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Matches
                                    SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 84
LENGTH: 24
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Patent No. 6429
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GENERAL INFORMATION:
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CURRENT APPLICATION NUMBER: US/09/325,193A
CURRENT FILING DATE: 1999-06-03
PRIOR APPLICATION NUMBER: US 09/154,614
PRIOR FILING DATE: 1998-09-16
PRIOR APPLICATION NUMBER: PCT/US98/04703
PRIOR APPLICATION NUMBER: PCT/US98/04703
PRIOR FILING DATE: 1998-03-10
                                                                                                       NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Krieg, Arthur M.
APPLICANT: Hartmann, Gunther
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: for Activating Dendritic Cells
FILE REFERENCE: C1039/7017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US (PRIOR FILING DATE: 1997-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Schorr, Joachim
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Use of Nucleic Acids Containing
TITLE OF INVENTION: Unmethylated CpG Dinucleotide ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
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DRGANISM: Artificial Sequence
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Pred. No.
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GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

APPLICANT: Krieg, Arthur M.

APPLICANT: Hartmann, Gunther

ITITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules

FILE REFERENCE: C1039/7017

CURRENT APPLICATION NUMBER: US/09/191,170

CURRENT FILING DATE: 1998-11-13

EARLIER APPLICATION NUMBER: US 08/960,774

EARLIER APPLICATION NUMBER: US 08/738,652

EARLIER APPLICATION NUMBER: US 08/738,652

EARLIER APPLICATION NUMBER: US 08/366,063

EARLIER FILING DATE: 1996-10-30

EARLIER FILING DATE: 1995-02-07

EARLIER APPLICATION NUMBER: US 08/386,063

EARLIER FILING DATE: 1995-02-07

EARLIER FILING DATE: 1995-02-07

EARLIER FILING DATE: 1994-07-15

SOPTWARE: FASTSEQ for Windows Version 3.0

LENGTH: 24

TYDE: Num
                                                RESULT 11
US-09-690-921-4
; Sequence 4, Application US/09690921
; Patent No. 6544518
                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                        Query Match
Best Local s
                                                                                                                                                                                                                                                         Matches
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US-09-191-170-95
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S-09-13. Sequence 95, App. No. 64291
                                                                                                                                                                                                                                                                                                                                -09-191-170-95
                                                                                                                                                                                                                                                                                                                                             NAME/KEY: modified base LOCATION: (21)...(21) OTHER INFORMATION: m5c
                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: (13)...(13)
OTHER INFORMATION: m5c
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Best Local S
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OTHER INFORMATION: m5c
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OTHER INFORMATION: m5c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
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1 Similarity 75.0%; Score 24; DB 3; L
1 Similarity 100.0%; Pred. No. 0.00042;
24; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                           Score 24; DB 3; L; Pred. No. 0.00042;
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APPLICANT: Krieg, Arthur M.

TITLE OF INVENTION: Methods of Treating Cancer Using
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
CURRENT APPLICATION IMMER: US/09/337,619
CURRENT APPLICATION NUMBER: US/09/337,619
EARLIER APPLICATION NUMBER: US/08/960,774
EARLIER FILING DATE: 1999-06-21
EARLIER FILING DATE: 1997-10-30
EARLIER FILING DATE: 1997-10-30
EARLIER FILING DATE: 1996-03/38,652
EARLIER APPLICATION NUMBER: US/08/38,652
EARLIER APPLICATION NUMBER: US/08/386,063
EARLIER APPLICATION NUMBER: US/08/386,063
EARLIER FILING DATE: 1995-02-07
EARLIER FILING DATE: 1995-02-07
EARLIER FILING DATE: 1994-07-15
RESULT 13
US-09-965-101-3
; Sequence 3, Application US/09965101
; Patent No. 6821957
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Synthetic Oligonucleotide US-09-337-619-46
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US-09-337-619-46
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Best Local
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SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 46
LENGTH: 24
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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SEQ ID NO 4
LENGTH: 24
TYPE: DNA
ORGANISM: Human
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TITLE OF INVENTION: Vaccines
FILE REFERENCE: B45181-1
CURRENT APPLICATION NUMBER: US/09/690,921
CURRENT FILING DATE: 2000-10-18
PRIOR APPLICATION NUMBER: PCT/EP00/02920
PRIOR FILING DATE: 2000-04-04
PRIOR APPLICATION NUMBER: 09/301,829
PRIOR APPLICATION NUMBER: 09/301,829
PRIOR APPLICATION NUMBER: 09/301,829
PRIOR APPLICATION NUMBER: 990885.8
PRIOR FILING DATE: 1999-04-29
PRIOR FILING DATE: 1999-04-19
NUMBER OF SEQ ID NOS: 5
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                                                                                                                                                                                                                                       Local
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Similarity 100.0%; P
24; Conservative 0;
                                                                                                                                                            TCGTCGTTTTGTCGTTTTGTCGTT 24
                                                                                                                                    rcercerriercerrrercerr 24
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24; Conserv
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Gerard, Catherine
Hermand, Philippe
NVENTION: Vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75.0%; Score 24; DB 4; Length 24; 100.0%; Pred. No. 0.00042; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                                             Score 24; DB 4; L; Pred. No. 0.00042;
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Length 24;

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GENERAL INFORMATION:

APPLICANT: Davis, Heather L.

APPLICANT: Krieg, Arthur M.

APPLICANT: Krieg, Arthur M.

APPLICANT: Wu, Tong

TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: WINDER: US/09/965,101

CURRENT PILING DATE: 2001-09-26

PRIOR APPLICATION NUMBER: US 09/082,649

PRIOR APPLICATION NUMBER: US 09/082,649

PRIOR APPLICATION NUMBER: US 00/047,233

PRIOR FILING DATE: 1998-05-20

PRIOR PILING DATE: 1997-05-20

PRIOR PILING DATE: 1997-05-20

PRIOR APPLICATION NUMBER: US 60/047,209

PRIOR APPLICATION NUMBER: US 60/047,209

PRIOR PILING DATE: 1997-05-20

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APPLICANT: Wu, Tong
APPLICANT: Wu, Tong
TITLE OF INVENTION: Vectors and Methods for Immunization or
TITLE OF INVENTION: Therapeutic Protocols
FILE REFERENCE: Cl039/7057 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/965,101
CURRENT FILING DATE: 2001-09-26
PRIOR APPLICATION NUMBER: US 09/082,649
PRIOR APPLICATION NUMBER: US 09/082,649
PRIOR APPLICATION NUMBER: US 09/047,233
PRIOR FILING DATE: 1998-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 84
SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 3
LENGTH: 24
TYPE: DNA
                                                                                                                                                                             ; NAME/KEY: misc_feature ; LCCATION: (0)...(0) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(1) ...(
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; TYPE: DNA
; PRANISM: Artificial Sequence
; PEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: Has a phosphorothioate backbone.
US-09-965-101-3
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US-09-965-101-66
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Matches 24
Query Match
Best Local Similarity
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APPLICANT: Krieg, Arthur M.
APPLICANT: Schorr, Joachim
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
OTHER INFORMATION: synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Artificial Sequence
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24; Conservative
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100.0%; Pred. No. -
10e 0; Mismatches
75.0%;
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Score 24;
Pred. No.
DB 4; Length 24; 0.00042;
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                                                                                                                                                                          ; OTHER INFORMATION: Synthetic Oligonucleotide US-09-337-619-123
                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/337,619
CURRENT FILING DATE: 1999-06-21
EARLIER APPLICATION NUMBER: US 08/960,774
EARLIER APPLICATION NUMBER: US 08/738,652
EARLIER APPLICATION NUMBER: US 08/738,652
EARLIER FILING DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/276,358
                                                                  Query Match
Best Local Similarity 100.0%; F
Matches 23; Conservative 0;
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SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Methods of Treating Cancer Using
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE:
                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                       LENGTH: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24; Conservative
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rcercerrrercerrrercer 23
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                                                                                   71.9%; Score 23; DB 4;
100.0%; Pred. No. 0.001.
ive 0; Mismatches
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Search completed: February 14, 2005, 07:23:18 Job time : 103 secs

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Perfect score:
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Sequence	AX104221	AX104221	6	24	•	24	w
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Sequence	AX104054	AX104054	6	24	75.0	24	7
Sequence	AX045789	AX045789	σ	24	٠	24	σ
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Sequence	AX045780	AX045780	6	24	•	24	_
Sequence	AX045776	AX045776	6	24	•	24	0
Sequence	AX045771	AX045771	0	24		24	9
Sequence	AX040171	AX040171	6	24	75.0	24	8
	AR432469	AR432469	0	24	٠	24	7
Sequence	AR303121	AR303121	σ	24		24	σ
Sequence	AR222261	AR222261	0	24	٠	24	Ç
_	AR222250	AR222250	σ	24	75.0	24	4
	AR213877	AR213877	0	24		24	w
	AR182894	AR182894	თ	24		24	N
	AR182831	AR182831	6	24	٠	24	-
Sequence	CQ875565	CQ875565	σ	24	٠	24	0

ALIGNMENTS

## RESULT 2 AX355706 LOCUS DEFINITION ACCESSION VERSION KEYWORDS VERSION KEYWORDS SOURCE ORGANISM RESULT 1 AX104237 LOCUS DEFINITION ACCESSION REFERENCE AUTHORS TITLE JOURNAL FEATURES Query Match Best Local S Matches 32 ORGANISM source Sequence AX355706 synthetic construct synthetic construct 32; Conserv AX104237 Sequence 429 from Patent AX104237 AX104237.1 GI:13920434 Immunostimulatory nucleic acids Patent: WO 0122972-A 423 05-APR 2001) UNIVERSITY OF 10WA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical synthetic construct synthetic construct AX355706.1 GI:18620374 AX355706 other sequences; artificial sequences. Krieg, A.M., Schetter, C. and Vollmer, J.C. regreerrieregririeregririeregri 32 TCGTCGTTTTGTCGTTTTGTCGTTTTGTCGTT 32 (DE) 100.0%; Score 32; DB 6; llarity 100.0%; Pred. No. 1.3e-08; Conservative 0; Mismatches 0; 734 from Patent organism="synthetic construct" /mol\_type="unassigned DNA" /db\_xref="taxon:32630" Location/Qualifiers 32 bp WO0197843. 32 bp : WO0122972. DNA DNA Length 32; linear linear PAT 06-FEB-2002 PAT 01-MAY-2001 0 Gaps 0

other sequences; artificial sequences.

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FEATURES
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          Krieg,A.M., Schetter,C. and Vollmer,J.C.
Immunostimulatory nucleic acids
Patent: WO 0122972-A 305 05.APR-2001;
UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
                                                                                                 synthetic construct synthetic construct
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ilarity 100.0%;
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
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/mol_type="unassigned DNA"
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AX547166
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                  Bratzler,R.L.
Inhibition of angiogenesis by nucleic acids Patent: WO 02053141-A 305 11-JUL-2002; Coley Pharmaceutical Group, Inc. (US)
Location/Qualifiers
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Sequence 305 from Patent
AX547166
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Location/Qualifiers
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organism="synthetic construct"/mol_type="unassigned DNA"
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/db xref="taxon:32630"
/note="Synthetic oligonucleotide-chimeric phosphorothioate/phosphodiester backbone with phosphodiester on 5' end"
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/mol types"unassigned DNA"
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Sequence 15
AR182843
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1 (bases 1 to 52)

Krieg,A.M., Davis,H.L., Wu,T. and Schorr, J. Vectors and methods for immunization or the Patent: US 6339068-A 15 15-JAN-2002;
                                                                                                                                                                                                                                                   Sequence 90
AR146378
                                                                                                                             Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines jacent: US 6218371-A 90 17-APR-2001;
Location/Qualifiers
                                                                                                                                                                       1 (bases 1 to 24)
Krieg, A.M. and Weiner, G.
                                                                                                                                                                                                          Unknown
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Synthetic Sequence"
                                                                                            /organism="unknown"
/mol_type="unassigned DNA"
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                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="unknown"
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100.0%; Pre
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100.0%; Pred. No. 4.4e-05;
tive 0; Mismatches 0;
                                         Score 24; DB; Pred. No. 0.0
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Pred. No.
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Method of controlling hematopoiesis by using CpG oligonucleotide
Patent: JP 2002514397-A 90 21-MAY-2002;
CORY PHARMACEUTICALS GMBH, CORY PHARMACEUTICALS GROUP INC
OS ARTÉLICIAL Sequence
PN JP 2002514397-A/90
PD 21-MAY-2002
PF 14-MAY-1999 US 60/085216,02-FEB-1999 US 09/241653 PI
HERMANN WAGNER, GRAYSON LIPFORD
PC C12N15/09, A61K31/70, A61K39/39, C07H21/04//A61K45/00, C12N15/00
CC Synthetic Sequence
FH Key 1. 24
FT Source /organism='Artificial Sequence'.
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24; Conserv
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Krieg, A.M. and Kline, J.N.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of controlling hematopoiesis
                                                                                                                                                                 /organism='Artificial
                                                                                                                 /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="unknown"
/mol_type="unassigned DNA"
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100.0%; Pre
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1 (bases 1 to 24)

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MCCluskie, M. J. and Davis, H. L.

MCLUSKIE, A. T. And Davis, H. L.

MCLUSKIE, M. J. and Davis, H. L.

MCLUSKIE, A. T. And Davis, H. L.

MCLUSKIE, A. T. And Davis, H. L.

MCLUSKIE, A. A. And Da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
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L Patent: JP 2002510644-A 90 09-APR-2002;
UNIVERSITY OF IOWA RESEARCH FOUNDATION

OS Artificial Sequence
PN 07-2002510644-A/90
PD 09-APR-2002
PF 02-APR-1999 JP 2000542030
PF 02-APR-1999 US 60/080729
PR 03-APR-1998 US 60/080729
PR 03-APR-1998 US 60/080729
PR ARTHUR M KRIEG/GEORGE WEINER
PC A61X39/00,A61X31/7088,A61X39/00,A61P15/00,A61P37/
PC A61X37/02
CC Synthetic Sequence
FF Key Location/Qualifiers
FT source /organism='Artificial Sequence'.
A61K39/00,A61K9/10,A61K9/16,A61K9/50,A61K9/51,A61K31/70,A61K39/39,
PC A61P31/00,A61P35/00,A61P37/00
CC immunostimulatory synthetic oligonucleotide
PH Key Location/Qualifiers
FT source 1. .24
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Krieg, A.M. and Weiner, G.
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03-APR-1998 US 60/080729
ARTHUR M KRIEG, GEORGE WEINER
A61K38/00, A61K31/7088, A61K39/00, A61P15/00, A61P35/00, A61P37/04,
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/mol_type="genomic DNA"
/db_xref="taxon:32630"
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PR 19-APR-1999 GB 9908885.8,29-APR-1999 US 09/301829 PI
MARTIN FRIEDE, NATHALIE GARCON, PHILIPPE HERMAND PC
A61K39/39,A61K31/7088,A61K39/00,A61K39/00,A61K39/00,A61K39/02, PC
A61K39/095,
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SMITHKLINE BEECHAM BIOLOGICALS SA
OS Homo sapiens (human)
PN JP 2002542203-A/4
PD 10-DEC-2002
PF 04-APR-2000 JP 2000611936
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Vaccine.
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JP 2002542203-A/4.
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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/mol_type="genomic DNA"
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Patent: JP 2002521489-A 77 16-JUL-2002;

UNIVERSITY OF IOWA RESEARCH FOUNDATION

OS Artificial Sequence

PN JP 2002521489-A/77

PD 16-JUL-1999

PF 27-JUL-1999 UP 2000562385

PR 27-JUL-1998 US 60/094370

PR 27-JUL-1998 US 60/094370

PR ARTHUR M KRIEG

PC A61K31/711,A61P11/06,A61P17/00,A61P27/02,A61P29/00,A61P31/00,

PC A61P31/00,

PC A61P35/00,A61P37/04,A61P37/06,A61P37/08

PC A61P35/00,A61P37/04,A61P37/06,A61P37/08

PC Synthetic

FH Key

I Cocation/Qualifiers

FT source

/ Organism='Artificial Sequence'.
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Gramzinski,R.A., Krieg,A.M., Davis,H.L. and Hoffman,S.L.
Methods for the prevention and treatment of parasitic infections and related diseases using CPG oligonucleotides
and related diseases using CPG oligonucleotides
Patent: JP 2002513763-A 77 14-MAY-2002;
UNIVERSITY OF IOWA RESEARCH FOUNDATION, OTTAWA CIVIC LOEB RESEARCH INSTITUTE, UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY
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27-UUL-1998 US 60/094370
ARTHUR M KRIEG
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06-MAY-1998 US 60/084512
ROBERT A GRAMZINSKI,ARTHUR M KRIEG,HEATHER L DAVIS,STEPHEN
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밁 \$ ORIGIN Query Match Best Local Similarity Matches source 1 TCGTCGTTTTGTCGTTTTTGTCGTT 24 Conservative /organism="synthetic construct"
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## ALIGNMENTS

JOURNAL PUBMED REFERENCE AUTHORS TITLE PUBMED REFERENCE AUTHORS REFERENCE AUTHORS REFERENCE AUTHORS TITLE SOURCE ORGANISM VERSION KEYWORDS RESULT 1 AL756165/c COMMENT ACCESSION DEFINITION Pocas JOURNAL MEDLINE JOURNAL MEDLINE PUBMED TITLE TITLE JOURNAL Strizhov,N., Rosso,M.G., Li,Y. and Weisshaar,B.

Direct Submission

Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer Submitted for Sender of the This sequence has been recovered from the right border of the sequence are described in References 1-3. Re-examination of the source from which this sequence has been produced indicates that the sequence is of low reliability. Therefore, no information on a potential matter. High-throughput generation of sequence mutagenized Arabidopsis thaliana lines BioTechniques 35 (6), 1164-1168 (2003) Weisshaar, B. Strizhov, N., Plant Mol. 23117147 An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003) Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B GABI-Kat SimpleSearch: a flanking sequence tag (FST) databass the identification of T-DNA insertion mutants in Arabidopsis Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis. Arabidopsis thaliana (thale cress) Arabidopsis thaliana AL756165.1 GSS. Arabidopsis thaliana T-DNA genomic survey sequence. AL756165 R0980, M.G., AL756165 Weisshaar,B. Bioinformatics 14682050 4756321 2874060 2755829 (bases 1 to 38) Li,Y., GI:21488663 Li,Y., Rosso,M.G., 19 (11), 1441-1442 (2003) Strizhov, N., flanking ģ Viehoever, P., Dekker, K.A. Reiss,B., DNA DNA linear GSS 31-MAR-2004 sequence GK-106B12-012499, indexes Dekker, K. from T-DNA database for for

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                                                                                                                                                                                                                                                    Email: est@watson.wustl.edu
The library was constructed by Claire Murphy and Dr. James McCarter Washington University, St. Louis. Meloidogyne incognite eggs were provided by Andrew Kloek of Divergence Inc., St. Louis, Mo. The vector to vector length is 65 Seq primer: -40Rp from Glbco.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 50)

1 (bases 1 to 50)

McCarter, J., Clifton, S., Chiapelli, B., Pape, D., Martin, J., Mylie, T., Dante, M., Marra, M., Hillier, L., Kucaba, T., Theising, B., Wylie, T., Gibbons, M., Ritter, E., Bennett, J., Franklin, C., Tsagareishvili, R., Ronko, I., Kennedy, S., Maguire, L., Beck, C., Underwood, K., Steptoe, M., Allen, M., Person, B., Swaller, T., Harvey, N., Schurk, R., Kohn, S., Shon, S., Swaller, T., McCann, R., Waterston, R. and Wilson, R., Jackson, Y., Cardenas, M., The Washington Univ. Nematode EST Project, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The Washington Univ. Nematode EST Project, 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Fax: 314 286 1810
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Nematoda; Chromadorea; Tylenchida; Tylenchina; Tylenchoidea; Heteroderidae; Meloidogyninae; Meloidogyne.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Meloidogyne incognita (southern root-knot nematode)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BQ613522
50 bp mRNA linear EST 26-UT forces for the first state of the
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                                                      /db_xref="taxon:6306"
/dev_stage="egg"
                                                                                                                                                /organism="Meloidogyne
/mol_type="mRNA"
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host="DHlOB (Invitrogen)"
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/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
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/mol_type="genomic DNA"
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100.0%; Pred. No.
Live 0; Mismatc
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0, Indels
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Direct Submission
AL Submitted (23-OCT-2003) Balzergue S., UMRGV, INRA/CNRS, 2 rue
Gaston Cremieux, 91057 Bvry cedex, FRANCE
PCR was performed on DNA from transformants of Arabidopsis thaliana
the PCR were directly sequenced from the left or the right border
derived sequences were removed. Information to order the
graphical display of the insertion site a database providing a
http://dbsgap.versailles.inra.fr/publiclines. This sequence her generated in the framework of the French plant sequence
been generated in the framework of the French plant genomics
http://www.genoplante* (http://www.genoplante.com and
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Arabidopsis thaliana T-DNA flanking sequence, right border, clone 518D07, genomic survey sequence.
AJ600996
AJ600996
AJ600996.1 GI:37950624
GSS; right border; T-DNA flanking sequence.
Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledona; Core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brunaud, V., Balzergue, S., Dubreucg, B., Chauvin, S., Bechtold, N., Cruaud, C., DeR Lepiniec, L., Caboche, M. and Lecharny, A. T-DNA integration into the Arabidopsis
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/note="T-DNA flanking sequence
right border"
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                            /clone_lib="Arabidopsis thaliana T-DNA insertion lines"
1. .23
                                                                                                        /cultivar="Wassillewskija"
/db_xref="taxon:3702"
                                                                                                                                                         organism="Arabidopsis thaliana"

organism="Arabidopsis thaliana"
                                                                                                     clone="518D07"
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/note="Vector: pCRII-TOPO (Invitrogen); Site_1: EcoRI;
Site_2: EcoRI; The library was constructed by Claire
St. Louis. Oligo(dT) - SL1 PCR based library. cDNA PCR
products of size >400 nucleotides containing SL1 on the
cloned into pCRII-TOPO(Invitrogen) following the Topo TA
cloning protocol. Meloidogyne incognita eggs were provided
by Andrew Kloek of Divergence Inc., St. Louis, MO."
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DeRose,R., Pelletier,G.,
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Query Match

Score

DB 9;

Length

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (23 -OCT-2003) Balzergue S., UMRGV, INRA/CNRS, 2 rue
Gaston Cremieux, 91057 Evry cedex, FRANCE
PCR was performed on DNA from transformants of Arabidopsis thaliana
plants from INRA (Versailles). The DNA fragment(s) resulting from
the PCR were directly sequenced from the left or the right border
to determine the genomic sequence flanking the insertion. T-DNA
derived sequences were removed. Information to order the
corresponding mutant line and a link to a database providing a
graphical display of the insertion site are available at
http://dbsgap.versailles.inra.fr/publiclines/. This sequence has
been generated in the framework of the French plant genomics
program 'Genoplante' (http://www.genoplante.com and
http://genoplante-info.infobiogen.fr).

S
Location/Qualifiers
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BH863768 47 bp DNA linear GSS 05-AUG-2002 SALK 094542 Arabidopsis thaliana TDNA insertion lines Arabidopsis thaliana genomic clone SALK_094542, genomic survey sequence.
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T-DNA integration into the Arabidopsis genome depends on sequences of pre-insertion sites

EMBO Rep. 3 (12), 1152-1157 (2002)
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GSS; left border; T-DNA flanking sequence.
Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Balzergue,
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Arabidopsis thaliana T-DNA flanking sequence,
425H07, genomic survey sequence.
AJ595925
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                                                                                                                                                                                                                                                                                                                                         /note="T-DNA flanking
left border"
                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Arabidopsis thaliana T-DNA insertion lines"
1. .34
                                                                                                                                                                                                                                                                                                                                                                                                                                       cultivar="Wassillewskija"
db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Arabidopsis thaliana"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                        clone="425H07"
                                                                                                                                                                                                                         37.5%; 5-
100.0%; Prr
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Pred. No.
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0; Mismatches 0;
                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                          sequence
                                                                                                                                                                                                                                                     DB 9; Length 34;
4.7e+03;
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border, clone
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AU256787/c
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AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                     1 (bases 1 to 49)

Kato, K. and Matoba, R.

Generation of expressed sequence tags from Unpublished (2002)

Contact: Kikuya Kato
Graduate School of Biological Sciences
Nara Institute of Science and Technology
8916-5 Takayama, Ikoma, Nara 630-0101, Japa
                                                                                                                                                                                                                                                                                                             AU256787
AU256787 3'-directed mouse cDNA library Mus musculus cDNA clone
BED0008976 3', mRNA sequence.
AU256787
AU256787
AU256787.1 GI:20320777
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Mus musculus (house mouse)
Mus musculus
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Salk Institute Genomic Analysis Laboratory (SIGnAL)
The Salk Institute for Biological Studies
10010 N. Torrey Pines Road, La Jolla, CA 92037, USA
Tel: 858 453 4100 x1752
Fax: 858 558 6379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 CGTCGTTTTGTC 13
                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Class: TDNA tagged
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Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alonso,J.M., Leisse,T.J., Barajas,P., Chen,H., Cheuk,R., Gadrinab,C., Jeske,A., Karnes,M., Kim,C.J., Parker,H., Prednis,L., Shinn,P., Zimmerman,J. and Ecker,J.R.
A Sequence-Indexed Library of Insertion Mutations in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Trachec
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This is single pass sequence recovered from the left border TDNA. This sequence lies within 300 bases of the 5' end of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: ecker@salk.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rosids; eurosids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="SALK_094542"
/clone lib="Arabidopsis thaliana TDNA insertion lines"
/clone lib="Arabidopsis thaliana lines
/note="PCR was performed on Arabidopsis thaliana lines
each of which contains one or more TDNA insertion
elements. The resultant fragment for each line was
directly sequenced to determine the genomic sequence at
the site of insertion. Details of the protocols used can
be found at http://signal.salk.edu/tdna_protocols.html"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Arabidopsis thaliana"
/mol_type="genomic DNA"
/ecotype="Col-0"
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Pred. No.
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                                                                                                                                                                                                            Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 8; Le
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                                                                                                                                                  mouse brain
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                                                                                                                                                                                                                               Euteleostomi;
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VERSION
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AZ472468
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Best Local (
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                                                                                                                                                                                                                                                                                                                                        Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0287 row: P column: 08
Seq primer: CACACAGGAAACAGCTATGACC
                                                                                                                                                                                                                                                                                                    High quality sequence stop: 50. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                     Class: plasmid ends
                                                                                                                                                                                                                                                                                                                                                                                                            Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                                                                                                                                                                                                                                                                                                                                     University of Utah Genome Center University of Utah Rm. 308, Biomedical Polymers Rese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly, M., Rose, M., Rose, R., Stokes, R., Tingey, A., von, T., Miederhausern, A. and Wright, D., Weiss, R., Wouse whole genome scaffolding with paired end reads from 10kb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
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AZ472468
1M0287P08R Mouse 10kb plasmid UUGCIM library Mus musculus genomic clone UUGCIM0287P08 R, genomic survey sequence.
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                      /lab host="E. Coli strain XL10-Gold, T1-resistant, F-"
/clone lib="Mouse 10kb plasmid UUGCIM library"
/note="Wector: PWD$27v; Purified genomic DNA from M.
Laboratory Mouse DNA Resource
(http://www.jax.org/resources/documents/dnares/). The DNA
0.005 inch orifice at constant velocity. The sheared DNA
was blunt end-repaired with T4 DNA polymerase and T4
ligated to the blunt ends in high molar excess. The
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: kkato@bs.aist-nara.ac.jp,
URL:http://love2.aist-nara.ac.jp/BED/index.html.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTGTCGTTTT 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
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                                                                                                                                                                                                                                         /organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                        sex="Male"
                                                                                                                                                                                                                clone="UUGC1M0287P08"
                                                                                                                                                                                                                                _xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue type="brain"
/clone_Tib="3'-directed mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/mo1_type="mRNA"
/db_xref="taxon:10090"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37.5%; Score 12; DB 1; 100.0%; Pred. No. 4.7e+tive 0; Mismatches
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AUTHORS
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MEDLINE
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PUBMED
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/organism="Arabidopsis thaliana"
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RS Rosso, M.G., Li,Y., Strizhov,N. and Weisshaar,B.
Direct Submission
Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer
This sequence has been recovered from the left border of the T-DNA.
It indicates an insertion within the locus defined by BAC clone
sequence are described in References 1-3. The sequences are
generated at the MPI for Plant Breeding Research in the context of
the GABI-Kat project. GABI-Kat is part of the German Plant Genomics
program designated 'GABI'. Information on line availability can be
Location/Qualifiers

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                             High-throughput generation of sequence indexes from T-DNA BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Weisshaar, B.
An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics
Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strizhov,N., Li,Y., Rosso,M.G., Viehoever,P., Dekker,K.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GABI-Kat SimpleSearch: a flanking sequence tag (FST) database the identification of T-DNA insertion mutants in Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Arabidopsis thaliana
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosso, M.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bioinformatics 19 (11), 1441-1442 (2003)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 TIGTCGTTTTGT 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pWD42 (gij 4732114) gbj Apf129072.1), a copy-number with adaptore complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into the chemically-competent E. coli XL10-cold (Stratagene) cells and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Li,Y., Strizhov,N., Reiss,B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    37.5%; Score 12;
100.0%; pred. No.
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sequence GK-392H12-018271,
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db xref="taxon:3702"

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Submitted (31-MAR-2004) Weisshaar B., Max-Planck-Institut fuer Zuechtungsforschung, Carl-von-Linne-Weg 10, Koeln, 50829, Germany This sequence has been recovered from the left border of the T-DNA. It indicates an insertion within the locus defined by BAC clone f19i3. Details on the protocols used for generation of the sequence are described in References 1-3. The sequences are generated at the MPI for Plant Breeding Research in the context of the GABI-Kat is part of the German Plant Genomics program designated 'GABI'. Information on line availability can be found at: http://www.mpiz-koeln.mpg.de/GABI-Kat/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           An Arabidopsis thaliana T-DNA mutagenized population (GABI-Kat) for flanking sequence tag-based reverse genetics Plant Mol. Biol. 53 (1-2), 247-259 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana T-DNA flanking genomic survey sequence. AL754515
                                                                                                                                                                                                                                             Rosso, M.G., Li, Y., Strizhov, N. and Weisshaar, B. Direct Submission
                                                                                                                                                                                                                                                                                                                                      BioTechniques 35 (6), 1164-1168 (2003)
                                                                                                                                                                                                                                                                                                                                                            High-throughput generation of sequence indexes from T-DNA mutagenized Arabidopsis thaliana lines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Li,Y., Rosso,M.G., Strizhov,N., Viehoever,P. and Weisshaar,B. GABI-Kat SimpleSearch: a flanking sequence tag (FST) database for the identification of T-DNA insertion mutants in Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
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/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Li,Y., Rosso,M.G., Viehoever,P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 12; DB 9; L; Pred. No. 4.6e+03;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sakyo-ku, Kyoto, Ky
Tel: 81-75-753-4081
Fax: 81-75-705-1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 60)
Satoh,N., Satou,Y., Kohara,Y. and Shin-i,T.
Expressed genes in Ciona intestinalis
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ciona intestinalis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AV964458 Nori Satoh unpublished cDNA library, larva Ciona intestinalis cDNA clone cilv13e18 5', mRNA sequence.
       BH863639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Nori Satoh
Department of Zoology
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12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: satoh@ascidian.zool.kyoto-u.ac.jp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kyoto University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona; Phlebobranchia; Cionidae; Ciona.
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                                                                                                                                                                                                                                                                                                                                 /clone_lib="Nori Satoh unpublished cDNA library, larva"
                                                                                                                                                                                                                                                                                                                                                            /clone="cilv13e18"
/tissue_type="whole animal"
/dev_stage="larva"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="PCR was performed on DNA from Arabidopsis thaliana plants (T1) which were transformed with the T-DNA from vector pAC161 (GenBank accession number: AJ537514). The lines contain one or more T-DNA insertions. The DNA fragment(s) resulting from the PCR were directly sequenced to determine the genomic sequence flanking the insertion.
                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:7719"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Ciona intestinalis'
/mol_type="mRNA"
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/clone lib="Arabidopsis thaliana T-DNA insertion lines"
/ecotype="Col-0"
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14682050

(bases 1 to 57)

TITLE

Weisshaar,B. Strizhov, N.,

AUTHORS TITLE JOURNAL

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1 (Dases 1 to 63)

1 (Dases 1 to 63)

McCarter, J., Clifton, S., Chiapelli, B., Pape, D., Martin, J., Wylie, T., Dante, M., Marra, M., Hiller, L., Kucaba, T., Theis: Bowers, Y., Gibbons, M., Ritter, E., Bennett, J., Franklin, C. Tsagareishvili, R., Ronko, I., Kennedy, S., Maguire, L., Beck, Underwood, K., Steptoe, M., Allen, M., Person, B., Swaller, T., Harvey, N., Schurk, R., Kohn, S., Shin, T., Jackson, Y., Carden
                                                                                                                                 Haemonchus contortus
Bukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida;
Trichostrongyloidea; Haemonchidae; Haemonchinae; Haemonchus.
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CB064048.1 GI:27809626
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                                                                                                                                                                                                                   Haemonchus contortus
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Class: TDNA tagged.
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Salk Institute Genomic Analysis Laboratory (SIGnAL)
The Salk Institute for Biological Studies
10010 N. Torrey Pines Road, La Jolla, CA 92037, USA
Tel: 858 453 4100 x1752
Fax: 858 558 6379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis Genome 
Unpublished (2001)
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A Sequence-Indexed Library of Insertion Mutations in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; Core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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Arabidopsis thaliana
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ail: ecker@salk.edu
is is single pass sequence recovered from the left border of
NA. This sequence lies within 300 bases of the 5' end of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="genomic DNA"
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/bb_xref="taxon:3702"
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/clone="SALK 094273"
/clone="SALK 094273"
/clone="SALK 094273"
/clone="PCR was performed on Arabidopsis thaliana lines each of which contains one or more TDNA insertion line elements. The resultant fragment for each line was the sequenced to determine the genomic sequence at the site of insertion. Details of the protocols used can be found at http://signal.salk.edu/tdna_protocols.html"
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                                                                                                                                                                                                                                                                                sequence.
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PAMP1 v1 Haemonchus
                                                    Beck, C.,
                                                                                    Theising, B.,
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AUTHORS
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SOURCE
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CB192029
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Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Trichostrongyloidea; Haemonchidae; Haemonchinae; Haemonchus.

ICE 1 (bases 1 to 63)

RS McCarter, J., Clifton, S., Chiapelli, B., Pape, D., Martin, J., Mylle, T., Dante, M., Marra, M., Hillier, L., Kucaba, T., Theising, B., Wylle, T., Dante, M., Ritter, E., Bennett, J., Franklin, C., Theising, B., Tsagareishvili, R., Ronko, I., Kennedy, S., Maguire, L., Beck, C., Underwood, K., Steptoe, M., Allen, M., Person, B., Swaller, T., Harvey, N., Schurk, R., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, R., Waterston, R. and Wilson, R.

The Washington Univ. Nematode EST Project, 1999

"MAL Unpublished (1999)"
Contact: McCarter JP
The Washington Univ. Nematode EST Project, 1999
Washington University School of Medicine
4444 Forest Bark Parkway, Box 8501, St. Louis, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Haemonchus contortus
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The library was constructed by Claire Murphy and Dr. James McCarter Mashington University, St. Louis. The cDNA was made by using Dynabead oligo-dT priming (Dynal). PCR based library using a Clontech. Directionally cloned into the UDG sites of pAMPI. Whole Worm RNA was provided by Dr. Douglas Jasmer of Washington State University (djasmer@vetmed.wsu.edu).

Seq primer: Primer name ambiguous.
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Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
Fax: 314 286 1810
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Unpublished (1999)
Contact: McCarter JP
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//otce="Vector: pAMP1; Site_1: Not1; Site_2: Sal1; The
library was constructed by Claire Murphy and Dr. James
made by using Dynabead oligo-dT priming (Dynal). PCR based
library using a modified protocol from the SMART PCR cDNA
Synthesis Kit from Clontech. Directionally cloned into the
Douglas Jasmer of Washington State University
Douglas Jasmer of washington State University
(djasmer@vetmed.wsu.edu)."
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/db_xref="taxon:6289"
/tissue_type="whole organism"
/lab_host="DH10B"
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100.0%; Fr
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         Louis, MO
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AUTHORS
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VERSION
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Best Local 9
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Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida;
Trichostrongyloidea; Haemonchidae; Haemonchinae; Haemonchus.

CE 1 (Dases 1 to 64)
RS McCarter,J., Clifton,S., Chiapelli,B., Pape,D., Martin,J.,
Wylie,T., Dante,M., Marra,M., Hillier,L., Kucaba,T., Theising,B.,
Bowers,Y., Gibbons,M., Ritter,E., Bennett,J., Franklin,C.,
Tsagareishvili,R., Ronko,I., Kennedy,S., Maguire,L., Beck,C.,
Underwood,K., Steptoe,M., Allen,M., Person,B., Swaller,T.,
Harvey,N., Schurk,R., Kohn,S., Shin,T., Jackson,Y., Cardenas,M.,
McCann,R., Waterston,R. and Wilson,R.
The Washington Univ. Nematode EST Project, 1999
Contact: McCarter JP
The Washington Univ. Nematode EST Project, 1999
Washington University School of Medicine
4444 Porest Park Parkway, Box 8501, St. Louis, MO 63108, USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64 bp mRNA linear EST 05-FEB-2003 py32h10.y1 Haemonchus contortus whole worm pAMP1 v1 Haemonchus contortus cDNA 5', mRNA sequence.
The library was constructed by Claire Murphy and Dr. James McCarter at Washington University, St. Louis. The cDNA was made by using Dynabead oligo-dT priming (Dynal). PCR based library using a modified protocol from the SMART PCR cDNA Synthesis Kit from Clontech. Directionally cloned into the UDG sites of pAMP1. Whole worm RNA was provided by Dr. Douglas Jasmer of Washington State
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Location/Qualifiers
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/note="Vector: pAMP1; Site_1: NotI; Site_2: SalI; The
library was constructed by Claire Murphy and Dr. James
McCarter at Washington University, St. Louis. The CDNA was
made by using Dynabead oligo-dT priming (Dynal). PCR based
library using a modified protocol from the SMART PCR cDNA
Synthesis Kit from Clontech. Directionally cloned into the
UDG sites of pAMP1. Whole worm RNA was provided by Dr.
Douglas Jasmer of Washington State University
(djasmer@vetmed.wsu.edu)."
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/db xref="taxon:6289"
/tissue_type="whole organism"
/lab_host="DH10B"
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                  Salk Institute Genomic Analysis Laboratory (SIGnAL) The Salk Institute for Biological Studies 10010 N. Torrey Pines Road, La Jolla, CA 92037, USA Tel: 858 453 4100 x1752 Fax: 858 558 6379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                          Class: TDNA tagged.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alonso,J.M., Leisse,T.J., Barajas,P., Chen,H., Cheuk,R., Gadrinab,C., Jeske,A., Karnes,M., Kim,C.J., Parker,H., Prednis,L., Shinn,P., Zimmerman,J. and Ecker,J.R.
A Sequence-Indexed Library of Insertion Mutations in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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Unpublished (2001)
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Arabidopsis thaliana
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                                                                                                                                                                                                                                                                                                                                                                       This is single pass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Joseph R. Ecker
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/db_xref="taxon:3702"
/clone="SALK 068149.48.55.x"
/clone=lish="Arabidopsis thaliana TDNA insertion lines"
/note="PCR was performed on Arabidopsis thaliana lines
each of which contains one or more TDNA insertion
elements. The resultant fragment for each line was
directly sequenced to determine the genomic sequence at
the site of insertion. Details of the protocols used ca
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/note="Vector: pAMP1; Site 1: Not1; Site 2: Sal1; The
library was constructed by Claire Murphy and Dr. James
McCarter at Washington University, St. Louis. The cDNA was
made by using Dynabead oligo-dT prining (Dynal). PCR based
library using a modified protocol from the SMART PCR cDNA
Synthesis Kit from Clontech. Directionally cloned into the
UDG sites of pAMP1. Whole worm RNA was provided by Dr.
Douglas Jasmer of Washington State University
(diasmer@vetmed.wsu.edu)."
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/tissue_type="whole organism"
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/ecotype="Col-0"
                                                                                                                                                                                                                                                  organism="Arabidopsis thaliana"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Haemonchus contortus"

[mol_type="mRNA"]
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Pred. No.
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Search completed: February 14, 2005, 09:29:29 Job time : 7564 secs ORIGIN Query Match
34.4%; Score 1; DB 8; Length 23;
Best Local Similarity 100.0%; Pred. No. 1.9e+04;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps be found at http://signal.salk.edu/tdna\_protocols.html" 0;

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Page 8

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Minimum DB
Maximum DB
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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102.378 Million cell updates/sec
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GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
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        ADD899497

ADJ56908

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                                                                                                                                                                                                            Aar62721 LHRH-cont
Add89949 LHRH pept
Adj56908 Human LHR
Aay68573 Peptide i
Aay91165 Modified
                             Aar65381
Aar62725
Aar62724
                                                                                Aay91183
Aay68571
Aay68585
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Aay91177
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Peptide i
Universal
LHRH-cont
LHRH-cont
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Human LHR
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Modified
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25-MAR-2003 10-SEP-1995

(revised) (first entry)

AAR62721;

LHRH-containing immunogenic peptide.

AAR62721 standard; peptide;

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45	44	43	42	41	40	39	38	37	36	ω S	34	ω W	32	31	30	29	28	27	26
130	130	131	133	134	134	137	139	139	144	147	147	147	150	150	150.5	151.5	151.5	152	156
53.5	53.5	53.9	54.7	55.1	55.1	56.4	57.2	57.2	59.3	60.5	60.5	60.5	61.7	61.7	61.9	62.3	62.3	62.6	64.2
31	28	28	31	27	27	28	27	27	27	27	27	27	80	42	48	46	46	47	45
w	w	N	w	w	w	w	w	ω	w	w	w	N	ω	N	N	w	w	N	N
AAY91179	AAY91159	AAR62726	AAY91175	AAY91170	AAY68575	AAY91158	AAY91167	AAY91161	AAY91163	AAY91156	AAY68567	AAR62707	AAY68530	AAR62708	AAR62729	AAY91195	AAY68595	AAR62723	AAR62720
Aay91179	Aay91159	Aar62726	Aay91175	Aay91170	Aay68575	Aay91158	Aay91167	Aay91161	Aay91163	Aay91156	Aay68567	Aar62707	Aay68530	Aar62708	Aar62729	Aay91195	Aay68595	Aar62723	Aar62720
Modified			Modifi	Modified	Peptide	Modified	Modified	Modified	Modified	AVE	Peptide	LHRH-cont	Synthetic	LHRH-con	LHRH-cont	Inv	Peptide	LHRH-cont	LHRH-cont

## ALIGNMENTS

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RESULT 1
AAR62721
ID AAR6
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                                                                                           Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                WPI; 1994-357910/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-APR-1993;
14-APR-1994;
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                                                                                                                                                                                                                                                             Ladd AE, Wang CY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-1994.
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                                                                                                                                                                                                                                                                                                                              (LADD/) LADD A E. (WANG/) WANG C Y. (ZAMB/) ZAMB T.
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94US-00229275.
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LHRH-cont

Claim 8; Page 88; 213pp; English.

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RESULT 2
ADD89949
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic immunogenic peptides are provided in which a universal immune CC stimulator is linked to a peptide or protein hapten containing B cell cand/or cytotoxic T lymphocyte epitopes, giving a product which causes CC potent immune responses to the coupled peptide or protein. The stimulator CC consists of (A) a promiscuous helper T cell epitope (Th) which elicits an CC sequence from the invasin protein of versinia. Spacer amino acid CC sequence from the invasin protein of versinia. Spacer amino acid CC domains and between the immune stimulator and hapten components. When the immune stimulator and hapten components when the CC containing immunogenic peptide as above which can be used as a potent CC vaccine for treating e.g. protestatic hyperplasia, androgen-dependent consign uterine tumours, recurrent functional ovarian cysts, (severe) cc induction of infertility. (Updated on 25-MAR-2003 to correct PN field.)
The present sequence is that of a synthetic immunogenic peptide derived from human LHRH. This is an example of peptides that can be used in claimed immunostimulatory complexes of the invention that are specifically adapted to act as adjuvant and as peptide immunogen stabiliser. The complexes comprise a CpG oligonucleotide and a biologically active peptide immunogen. The complex is particulate and c.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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Best Local (
                                                                                                                            Stabilized immunostimulating complex, useful for vaccination, e.g. against human immune deficiency viruses, comprises cationic peptide immunogen and anionic oligonucleotide.
                                                                                                                    Claim 17; SEQ ID
                                                                                                                                                                                                        WPI; 2003-778890/73.
                                                                                                                                                                                                                                                             (UNBI-) UNITED BIOMEDICAL
                                                                                                                                                                                                                                                                                              14-FEB-2002;
31-JAN-2003;
                                                                                                                                                                                                                                                                                                                                14-FEB-2003; 2003WO-US004711.
                                                                                                                                                                                                                                                                                                                                                                                               WO2003068169-A2
                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LHRH peptide used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADD89949 standard; protein; 45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 45 AA;
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45; Conserv
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                                                                                                                                                                                                                                                                                        2002US-00076674.
2003US-00076674.
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                                                                                                                      ŏ
                                                                                                             9; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immunostimulant complex for prostate cancer vaccine.
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Pred. No. 4.1e-27;
0; Mismatches 0;
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Best Local S
Matches 45
                                                                                                                                                                                                                                                The invention relates to an immunostimulatory complex specifically adapted to act as adjuvant and as a peptide immunogen stabiliser. The invention is useful for preparing a water-in-oil emulsion, suspension and vaccine. It is also useful for treating prostate cancer, hormone ablation, allergy, HIV infection, foot-and-mouth disease, etc. The present sequence is human LHRH immunogenic peptide used in the invention.
                                                                                                                                                                                                                                    Sequence 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stabilized immunostimulatory complex useful for treating allergy, HIV infection or prostate cancer, comprising cationic peptide immunogen anionic CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 17; SEQ ID NO 9; 63pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2004-212745/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-MAY-2003; 2003US-00355161.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-JAN-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human LHRH immunogenic peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADJ56908 standard; peptide; 45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 45 AA;
                         1 TAKSKKFPSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG
                                                                                                               ch 100.0%; 1 1 Similarity 100.0%; 1 45; Conservative 0;
TAKSKKFPSYTATYOFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG
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Conservative 0;
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                                                                                                       Score 243; DB 8;
Pred. No. 4.1e-27;
Mismatches 0;
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Pred. No. 4.1e-27;
; Mismatches 0;
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                                                                                                                                                       Length
                                                                                                       Indels
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                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
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The present sequence represents a peptide immunogen comprising an invasin CC domain immunostimulatory peptide of Yersinia sp., a synthetic helper T CC cell (Th) epitope and a target antigen, luteinising hormone-releasing CC hormone (LHRH). The synthetic Th epitope is derived from a structured CC synthetic antigen library (SSAL) designated SSALI Th1. SSAL Th1 is CC modelled after a promiscuous epitope taken from the F protein of the CC modelled after a promiscuous epitope taken from the F protein of the CC measles virus. The peptide immunogens cause induction of a specific cc immune response to LHRH which is involved in regulation of specific cc spermatogenesis, ovulation, oestrus, sexual development and secretion of spermatogenesis, ovulation, oestrus, sexual development and excretion of ex hormones. Provision of a promiscuous T helper epitope (which is CC immunogenicity to the B cell epitopes of the target antigen and thus high CC invention are used to vaccinate against mammalian LHRH, for use as CC invention are used to vaccinate against mammalian LHRH, for use as CC of prostate or breast, also endometricles; to prevent boar taint (and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lutelnising hormone-releasing hormone; spermatogenesis; ovulation; oestrus; sexual development; sex hormone; promiscuous T helper epitope; vaccine; contraceptive; hormone-dependent tumour; prostate cancer; breast cancer; endometriosis; boar taint; meat quality; invasin domain;
                                                                                                                                                                                                                                                                                                                                                                  New peptide immunogen containing luteinizing hormone-releasing antigen site and helper T cell epitope, for e.g. contraception
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yersinia sp.
                                                                                                                                                                                                                                                                                                                     Claim 9; Page 71; 102pp; English
                                                                                                                                                                                                                                                                                                                                                      treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-160562/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide immunogen comprising a Th epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY68573 standard; peptide; 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UNBI-) UNITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9966952-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Helper T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunocastration.
                              meat quality)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       epitope; F protein; Measles virus; peptide immunogen; LHRH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIOMEDICAL INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US013960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               note= "LHRH antigenic epitope AAY68566'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note= "helper Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "invasin domain AAY68565"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .33
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35
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                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "spacer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "spacer"
                               for immunocastration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               epitope AAY68544'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and LHRH target antigen.
                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                    hormone
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Sequence 45

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RESULT 5
AAY91165
ID AAY9
AXX AAY9
AXX AAY9
AXX AAY9
AXX AAY9
DT 12-S
DT 22-M
AX MODI
XX MODI
XX Prom
KW Prom
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KW Pooma
KW Foots
KW Pooma
KW WPI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                    protein (CETP) or HIV epitopes, but more generally against any pathogen, immunoreactive self-antigen or tumour antigen. The The pitopes and peptide immunogens may be used for prevention and/or treatment of infections (HIV, foot-and-mouth disease or malaria); for cancer immunotherapy; for inhibition of the action of luteinising hormone releasing hormone (LHRH) for contraception, treatment of hormone-dependent cancer, prevention of boar taint in meat, and immunocastration); for promoting the growth of animals; or for treating allergies or arteriosclerosis. Incorporation of a promiscuous Th (functional in genetically diverse subjects) into an immunogen improves capacity to induce a strong Thelper cell-mediated immune response, resulting in production of antibodies against a target antigen. Th can replace carrier represents a promiscuous Thelper epitopes. Sequence AY91121 represents a promiscuous Thelper epitopes. Sequence AY91121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to novel promiscuous T helper cell epitopes (Th), and immunogenic peptides comprising the Th epitopes of the invention along with B cell epitopes. The Th epitopes and peptide immunogens containing them, are used to induce a T helper cell response, specifically against Plasmodium falciparum, cholesteryl ester transport
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or human immune deficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New artificial T helper cell epitope and antigenic site, for immunization against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin E; IgE; anti-allergic; plasmodium falciparum; circumsporozoite; antimalarial; CETP; cholesteryl ester transport protein; anti-arteriosclerotic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page 80; 129pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-160564/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-SEP-2003
22-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-DEC-1999.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UNBI-) UNITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Measles virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Promiscuous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified MVF Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAKSKKFPSYTATYQFGGISEIKGVIVHKIEGIGGEHWSYGLRPG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAKSKKFPSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T-cell epitope; measles virus F protein; MVF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BIOMEDICAL INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-00100412.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US013975.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epitope/LHRH antigenic peptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 235; DB 3; Pred. No. 5.7e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              derived immunogens with target e.g. malaria, arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO:45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
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RESULT 6
AAR62728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC represent synthetic Th epitopes based on the MVF Th epitope. Sequence CC ANY91143 represents a promiscuous The epitope from hepatitis B virus (HBV) CC surface antigen, and sequences AAY91144-Y91155 are synthetic epitopes (CC y91244 are antigenic peptides comprising an LHRH sequence Joined to a used in these LHRH antigenic peptides. AAY91201 is somatostatin, and ce pitope. AAY91207 are antigenic peptides comprising somatostatin, and complete comprising somatostatin, and complete comprising somatostatin and a Theorem (CC AAY91209-Y90211 are MVH Th epitope/CD4 CDR2 antigenic peptides which may be used to promote growth in complete comprising somatostatin, and complete comprising somatostatin and a Theorem (CC AAY91209-Y90211 are MVH Th epitope/CD4 CDR2 antigenic peptides which may version of a human IgE (immunoglobulin E) CH3 domain antigenic site, and complete comprision of a complete comprise this complete comprise comprising a comprise comprise this complete comprising a CETP comprise and AAY91221-Y91222 comprise the CC prevent or treat arteriosclerosis and cardiovascular disease. AAY91248-Y91251 and AAY91258-Y91257 are HIV-1 neutralising B-cell epitopes, and AAY91248-CC invasin protein epitope which may be used in a malaria vaccine. AAY91198 and AAY91273 are antigenic peptides comprising MVH Th and CC invasin protein epitope which may be used in a malaria disease. AAY91248-CC invasin protein epitope from Yersinia species, and hinge spacer peptide. CC invasin protein epitope from Yersinia species, and hinge spacer peptide, comprisine of which may be used in the antigenic peptide of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8888888888888888888888888888888888
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Best Local S
Matches 41
                          Misc-difference
                                                        Misc-difference
                                                                                           Misc-difference
                                                                                                                                                                                                                   Domain
                                                                                                                                                                                                                                                                                 Helper T cell epitope; universal immune stimulator; invasin; hapten; vaccine; LHRH; luteinising hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility; structured synthetic antigen library; SSAL.
                                                                                                                                                                                                                                                                                                                                                                             LHRH-containing immunogenic peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-2003
17-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR62728 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR62728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 45 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            n 96.7%;
Similarity 91.1%;
41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
(first entry)
                                                                   19..34

/note= "structured synthetic antigen library (see US Ser. No. 143312, 26 Oct 1993), where the variant positions noted below may be a mixture of the specified residues. This domain functions as a helper T cell epitope"
                                                          /label= Asp,
                                                                                                                                                                                     /note= "invasin domain"
                               label= Leu,
                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide; 46
Glu,
                                 Ile,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 235; DB 3;
Pred. No. 5.7e-26;
4; Mismatches 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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음 성

1 TAKSKKFPSYTATYOFGG-LSEIKGVIVHRLEGVGGEHWSYGLRPG |||||||||||||||| 1 TAKSKKFPSYTATYOFGGDISELKGLLLHKLEGLGGEHWSYGLRPG Query Match
Best Local Similarity
Matches 39; Conserv

89.1%;

Score 216.5; DB 2; Pred. No. 2.7e-23; 6; Mismatches 0;

Indels

Gaps

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4 4

Conservative

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Synthetic immunogenic peptides are provided in which a universal immune CC stimulator is linked to a peptide or protein hapten containing B cell cand/or cytotoxic T lymphocyte epicopes, giving a product which causes CC and/or cytotoxic T lymphocyte epicopes, giving a product which causes CC consists of (A) a promiscuous helper T cell epitope (Th) which elicits an CC immune response to the coupled peptide or protein. The stimulator CC immune response to the coupled peptide in members of a heterogeneous CC sequence from the invasin protein of Yersinia. Spacer amino acid The coupled peptide of Yersinia. Spacer amino acid The coupled peptide between the invasin and The CC domains and between the immune stimulator and hapten components. When the CC containing immunogenic peptide as above in which the This a structured CC containing immunogenic peptide as above in which the This a structured CC vaccine for treating e.g. prostatic hyperplasia, androgen-dependent Denign uterine tumours, recurrent functional ovarian cysts, (severe) conduction of infertility. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                       Claim 8; Page 88; 213pp; English.
                                                                                                                                                                                                                                                                                                                                           (LADD/) LADD A E
(WANG/) WANG C Y
(ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                      Immunogenic luteinising hormone releasing hormone peptide(s) - suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                       27-APR-1993;
14-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                       28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                               10-NOV-1994.
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 46
                                                                                                                                                                                                                                                                                                                   Wang CY,
AA;
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94US-00229275.
                                                                                                                                                                                                                                                                                                                                                                                                                    94WO-US004832.
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AAYSULT 7
AAYSUL
            The invention relates to novel promiscuous T helper cell epitopes (Th), CC and immunogenic peptides comprising the Th epitopes of the invention CC along with B cell epitopes. The Th epitopes and peptide immunogens CC containing them, are used to induce a T helper cell response, CC specifically against plasmodium falciparum, cholesteryl ester transport CC protein (CETP) or HIV epitopes, but more generally against any pathogen, CC immunoreactive self-antigen or tumour antigen. The Th epitopes and CC peptide immunogens may be used for prevention and/or treatment of CC infinitions (HIV, foot-and-mouth disease or malaria); for cancer CC immunotherapy; for inhibition of the action of luteinising hormone (CIRRH) for contraception, treatment of hormone-cC dependent cancer, prevention of boar taint in meat, and immunocastration); for promoting the growth of animals; or for treating allergies or CC arteriosclerosis. Incorporation of a promiscuous Th (functional in CC genetically diverse subjects) into an immunogen improves capacity to groteins and pathogen-derived T helper epitope. Sequence AAY91121 (CC proteins and pathogen-derived T helper epitope. Sequence AAY91126 (CC protein and sequences AAY91122-y91142, AAY91226 and AAY91245-y91246 (CC v91244 are antigen; peptides comprising an LHRH sequence joined to a continue capacity of the protein and sequences AAY91147, AAY9125 are synthetic epitopes (CC v91244 are antigen; peptides comprising an LHRH sequence joined to a continue conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wang
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY91177;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page 85; 129pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-160564/14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-SEP-2003
22-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UNBI-)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
(first entry)
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RESULT 8
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yersinia sp.
Measles virus.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    luteinising hormone-releasing hormone; spermatogenesis; ovulation; oestrus; sexual development; sex hormone; promiscuous T helper epitope; vaccine; contraceptive; hormone-dependent tumour; prostate cancer; breast cancer; endometriosis; boar taint; meat quality; invasin domain;
  20-JUN-1998;
                                                     21-JUN-1999;
                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
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                                                                                                                                                               WO9966952-A1
                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Helper T cell epitope; F protein; Measles virus; peptide immunogen; LHRH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide immunogen comprising a Th epitope and LHRH target antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mmunocastration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          invention. (Updated on 12-SEP-2003 to standardise OS field)
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  98US-00100414
                                                     99WO-US013960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                 /note= "LHRH antigenic epitope AAY68566"
                                                                                                                                                                                                                                                                                                                                                                           /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                note= "invasin domain AAY68565"
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                                                                                                                                                                                                                                                                 "spacer"
                                                                                                                                                                                                                                                                                                                                                                           "spacer"
                                                                                                                                                                                                                                                                                                                         "helper Th
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 213; DB 3;
Pred. No. 9.2e-23;
                                                                                                                                                                                                                                                                                                                      epitope AAY68547
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local 9
                                                                                                                            Measles virus.
Rattus sp.
Chimeric.
         20-JUN-1998;
                                   21-JUN-1999;
                                                                   29-DEC-1999.
                                                                                                  WO9966957-A2
                                                                                                                                                                                     Promiscuous T-cell epitope; measles virus F protein; MVF; hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMNV; foot and mouth disease virus; immunoglobulin E; IgE; anti-allergic; plasmodium falciparum; circumsporozoite; antimalarial; CETP; cholaster, antimalarial; CETP;
                                                                                                                                                                                                                                                                                                                                          12-SEP-2003
22-MAY-2000
                                                                                                                                                                                                                                                                                            Modified MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:52.
                                                                                                                                                                                                                                                                                                                                                                                                          AAY91172 standard; peptide; 45 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 45 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 9; Page 73; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New peptide immunogen containing luteinizing hormone-releasing hormone antigen site and helper T cell epitope, for e.g. contraception and treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-160562/14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TAKSKKPPSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45
||||||||||||||||||
1 TAKSKKPPSYTATYQFGGLTEIRTVIVTRLETVGGEHWSYGLRPG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 Similarity
40; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                      (revised)
(first entry)
    98US-00100412
                                 99WO-US013975
                                                                                                                                                                           transport protein; anti-arteriosclerotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 211; DB 3;
Pred. No. 1.6e-22;
2; Mismatches 3
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1 TAKSKKFPSYTATYQFGGLSBIKGVIVHRLBGVGGEHW8YGLRPG

TAKSKKPSYTATYOFGGLTEIRTVÍVTRLETVGGEHWSYGLRÞG

Query Match Best Local S Matches 40

l Similarity 40; Conserv

86.8%;

Score 211; DB Pred. No. 1.6e 2; Mismatches

DB 3; ..6e-22;

Length 45 Indels 45

0

0

Conservative

2;

Sequence 45 AA;

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The invention relates to novel promiscuous T helper cell spitopes (Th), cc along with self epitopes. The Th spitopes of the invention cc along with self epitopes. The Th spitopes and peptide immunogenis specifically against plasmodium falciparum. Coblesters of the invention containing them, are used to induce a T helper cell process and specifically against plasmodium falciparum. Coblesters of the immunogenis specifically against plasmodium falciparum. Coblesters of the process and infections (HIV, foot-and-mouth disease or malaria); for cancer releasing hormone (IAHH) for contraception, treat, and dismunoces are peptide immunogenis may be used for prevention of interinsing hormone of specific and the process of the action of interinsing hormone. Induce a strong the growth of animals or for the interinsing hormone of specific production of antibotics against a target antigen. The animumocastration of induce a strong T helper cell-mediated immunogenism. The can replace carrier of proteins and pathogen-derived T helper spitopes. Sequence AV91127 to protein and sequences AV91127-791142, AV9125 and AV9125-791246 and AV9126 protein and sequences AV91121 approximate the first protein and sequences av91144 average antigen; and av91221 and AV91224-791242 are protein and sequences av91197 is the Lith trayet antigenic peptide comprising antigenic peptides. AV9127 are antigenic peptides. AV9127 and AV9127 are antigenic peptides and avaluation of animal period and avaluation of animal period and avaluation and avaluation and avaluation of animal period and avaluation an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus.
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RESULT 10
AAY68583
ID AAY68
The present sequence represents a peptide immunogen comprising an invasin commain immunostimulatory peptide of Yersinia sp., a synthetic helper T cell (Th) epitope and a target antigen, luteinising hormone-releasing cell (Th) epitope and a target antigen, luteinising hormone-releasing cell (LHRH). The synthetic In epitope is derived from a structured synthetic antigen library (SSAL) designated SSAL1 Th1. SSAL Th1 is celles virus. The peptide immunogens cause induction of a specific cell immunogens cause induction of a specific cell immunogens cause induction of a specific cell spermatogenesis, ovulation, oestrus, sexual development and secretion of spermatogenesis, ovulation, oestrus, sexual development and secretion of expermatogenesis, rovision of a promiscuous T helper epitope (which is cell muniogenicity to the B cell epitopes of the target antigen and thus high cell muniogenicity to the B cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen. The peptide immunogens of the cell epitopes of the target antigen and thus high cell epitopes of the target antigen. The peptides of the cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the target antigen and thus high cell epitopes of the targ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New peptide immunogen containing luteinizing hormone-releasing hormone antigen slite and helper T cell epitope, for e.g. contraception and treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      luteinising hormone-releasing hormone; spermatogenesis; ovulation; oestrus; sexual development; sex hormone; promiscuous T helper epitope; vaccine; contraceptive; hormone-dependent tumour; prostate cancer; breast cancer; endometriosis; boar taint; meat quality; invasin domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-160562/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-JUN-1999;
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Measles virus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Helper T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide immunogen comprising a Th epitope and LHRH target antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9; Page 80; 102pp; English
                                          meat quality) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UNITED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cell epitope; F protein; Measles virus; peptide immunogen; LHRH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "LHRH antigenic epitope AAY68566"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "invasin domain AAY68565"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note= "spacer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 35
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "helper Th epitope AAY68551"
                                             for immunocastration
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Query Match

Score 208;

踞 ω --

Length 47;

epitopes based on the

Sequence 47 AA;

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RESULT 11
AAY91180
ID AAY91
XX
          The invention relates to novel promiscuous T helper cell epitopes (Th), CC and immunogenic peptides comprising the Th epitopes of the invention CC along with B cell epitopes. The Th epitopes and peptide immunogens CC containing them, are used to induce a T helper cell response, generating them, are used to induce a T helper cell response, CC specifically against plasmodium falciparum, cholesteryl ester transport protein (CETP) or HIV epitopes, but more generally against any pathogen, CC immunoreactive self-antigen or tumour antigen. The Th epitopes and CC peptide immunogens may be used for prevention and/or treatment of CC infections (HIV, foot-and-mouth disease or malaria); for cancer CC immunotherapy; for inhibition of the action of lutelnising hormone (CIPR) for contraception, treatment of hormone CC dependent cancer, prevention of boar taint in meat, and immunocastration); for gromoting the growth of animals; or for treatment of hormone CC arteriosclerosis. Incorporation of apromiscuous Th (functional in CC genetically diverse subjects) into an immunogen improves capacity to CC induce a strong T helper cell-mediated immune response, resulting in CC proteins and pathogen-derived T helper epitopes. Sequence AAY91121 (Proteins and sequences AAY91121 Proteins and sequences AAY91121 (Proteins and sequences AAY91122 Proteins AAY91245-Y91246).
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                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; Page 86; 129pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or human immune deficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-160564/14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-JUN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Promiscuous T-cell epitope; measles virus F protein; MVF; hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin B; IgB; anti-allergic; Plasmodium falciparum; circumsporozoite; antimalarial; CETP; holmodium falciparum; circumsporozoite; antimalarial; CETP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cholesteryl ester transport protein; anti-arteriosclerotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-SEP-2003
22-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY91180 standard; peptide; 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UNBI-) UNITED BIOMEDICAL INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inv epitope/modified MVF Th epitope/LHRH antigenic peptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yersinia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TAKSKKFPSYTATYQFGGLSEIKGVIVHRLEGV--GGEHWSYGLRPG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-00100412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US013975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 4.6e-22;
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3

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RESULT 12
AAY91166
ID AAY91
XX AAY91167
AC AAY91
XX T12-SE
DT 12-SE
DT 22-MJ
XX Prom
KW Prom
KW Prom
KW Prom
KW Hepa
KW Soone
KW Plai
KW Cho
XX Cho
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XX (1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Promiscuous T-cell epitope; measles virus F protein; MVF; hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticanc
                                                                                                                                                                             21-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; PMDV; foot and mouth disease virus; immunoglobulin E; IGE; anti-allergic; Plasmodium falciparum; circumsporozoite; antimalarial; CETP; cholesteryl ester transport profess.
                                                                                                                 20-JUN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Measles virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Modified MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:46.
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22-MAY-2000
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                                     (UNBI-) UNITED BIOMEDICAL INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY91166 standard; peptide; 45 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                             98US-00100412
                                                                                                                                                                                 99WO-US013975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transport protein; anti-arteriosclerotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85.6%;
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Pred. No. 4.6e-22;
4; Mismatches 2; Indels
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RESULT 13 AAY68586

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1 TAKSKKFPSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45

TAKSKKFPSYTATYQFGGITEIRTVIVTRIETIGGEHWSYGLRPG

45

Query Match Best Local S Matches 37

Similarity

84.8%;

Score 206; DB 3; Pred. No. 8.4e-22; Mismatches

Length 45 Indels

Conservative

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Gaps

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Containing them, are used to induce a Thelper cell epitopes (Th), and immunogenic peptides comprising the Thepitopes and peptide immunogens containing them, are used to induce a Thelper cell response. Containing them, are used to induce a Thelper cell response. Containing them, are used to induce a Thelper cell response. Containing them, are used to induce a Thelper cell response. Containing them, are used to induce a Thelper cell response. Containing them, are used to induce a Thelper cell response. Containing them, are used to induce a Thelper cell response. Containing them, for inhibition of the action of Intentialing bormone (LiRH) for contraception, treatment of hormone containing the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or for treatment of hormone contained the growth of animals; or growth of anim
                                             ARY91228-Y91231 represent CETP-derived peptides and ARY91232-Y91241 are immunogens comprising a CETP peptide and a Th epitope which may be used to prevent or treat arteriosclerosis and cardiovascular disease. ARY91247 and ARY91257 are HIV-1 neutralising B-cell epitopes, and ARY91248-Y91251 and ARY91257 are antigenic peptides comprising WH Th and HIV-1 B-cell epitope which may be used as a component in an anti-HIV-1 vaccine. ARY91198 and ARY91199 are respectively an immunostimulatory invasin protein epitope from Yersinia species, and hinge spacer peptide, both of which may optionally be used in the antigenic peptides of the invention. (Updated on 12-SEP-2003 to standardise OS field)
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-160564/14.
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The present sequence represents a peptide immunogen comprising an invasin CC domain immunostimulatory peptide of Yersinia sp., a synthetic helper T CC cell (Th) epitope and a target antigen, luteinising hormone-releasing CC hormone (LHRH). The synthetic Th epitope is derived from a structured Synthetic antigen library (SSAL) designated SSAL Thl. SSAL Thl is modelled after a promiscuous epitope taken from the F protein of the CC measles virus. The peptide immunogens cause induction of a specific immune response to LHRH which is involved in regulation of spermatogeness, ovulation, oestrus, sexual development and secretion of sex hormones. Provision of a promiscuous T helper epitope (which is functional in genetically diverse subjects) provides optimum commonal in genetically diverse subjects) provides optimum commiscity to the B cell epitopes of the target antigen and thus high antibody titres against the target antigen. The peptide immunogens of the invention are used to vaccinate against mammalian LHRH, for use as CC invention are used to vaccinate against mammalian LHRH, for use as CC control of hormone-dependent tumours (cancer of prostate or breast, also endometriosis); to prevent boar taint (and improve meat quality) and for immunocastration
      Query Match
Best Local S
Matches 38
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Measles virus.
Unidentified.
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                                                                                                                                     Sequence 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New peptide immunogen containing luteinizing hormone-releasing antigen site and helper {\tt T} cell epitope, for e.g. contraception
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-160562/14.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-JUN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY68586 standard; peptide; 47 AA
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      Local Similarity 80.
108 38; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9; Page 81; 102pp; English.
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17. .35
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1. .16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "LHRH antigenic epitope AAY68566"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "spacer'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=
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                                  83.5%;
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Score 203; DB 3;
Pred. No. 2.4e-21;
5; Mismatches 2
                                                                Length 47;
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Gaps

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RESULT 14
AAY91183
The invention relates to novel promiscuous T helper cell epitopes (Th), CC and immunogenic peptides comprising the Th epitopes of the invention CC along with B cell epitopes. The Th epitopes and peptide immunogens CC containing them, are used to induce a T helper cell response, specifically against plasmodium falciparum, cholesteryl ester transport protein (CETP) or HIV epitopes, but more generally against any pathogen, CC immunoreactive self-antigen or tumour antigen. The Th epitopes and communogens may be used for prevention and/or treatment of infections (HIV, foot-and-mouth disease or malaria); for cancer communotherapy; for inhibition of the action of luteinising hormone (CIARH) for contraception, treatment of hormone creleasing hormone (CIARH) for contraception, treatment of hormone-creleasing hormone (CIARH) for contraception, treatment of hormone-creleasing hormoting the growth of animals; or for treatment of hormone-creleasing hormoting the growth of animals; or for treatment of hormone-creleasing hormoting the growth of animals; or for treatment of area subjects) into an immunogen improves capacity to conduct a strong T helper cell-mediated immune response, resulting in production of pathogen-derived T helper spitopes. Sequence AAY91121 (represents a promiscuous T helper epitopes. Sequence AAY9126 (represent synthetic Th epitopes based on the MVF Th epitope. Sequence CC AAY9143 represents a promiscuous Th epitope from hepatitis B virus (HBV) contrace antigen, and sequences AAY9114-Y91155 are synthetic epitopes
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Rattus sp.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or human immune deficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-160564/14.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Promiscuous T-cell epitope; measles virus F protein; MVF; hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticance; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin B; IgE; anti-allergic; Plasmodium falciparum; circumsporozoite; antimalarial; CETP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Page 87; 129pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cholesteryl ester transport protein; anti-arteriosclerotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY91183 standard; peptide; 47
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22-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inv epitope/modified MVF Th epitope/LHRH antigenic peptide,
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(first entry)
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derived from this HBV epitope. AAY91156-Y91196, AAY91227 and AAY91242-Y91244 are antigenic peptides comprising an LHRH sequence joined to a promiscuous Thepitope. AAY91197 is the LHRH target antigenic peptide used in these LHRH antigenic peptides. AAY91200 is somatostatin, and AAY91201-Y91207 are antigenic peptides comprising somatostatin and a Th

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AAY68571

ID AAY68571

AAY68571

AC AAY68

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC epitope. Somatostatin immunogens may be used to prowth in and CC livestock. AAY91208 is a human CD4 CDR2-like domain antigenic site, and CC AAY91209-Y90211 are MVH Th epitope/CD4 CDR2 antigenic peptides which may CC be used to prevent HIV infection of T cells. AAY90212 is a modified CC version of a human IGE (immunoglobulin E) CH3 domain, and AAY90213-Y90219 CC are Th epitope/IGE CH3 antigenic peptides which may be used in the CC treatment of allergies, AAY91220 is a peptide derived from foot and mouth CC disease virus (FMDV) VP1 capsid protein and AAY91221-Y91222 comprise this CC peptide and a Th epitope. AAY91223 is a plasmodium falciparum CC circumsporozoite (CS) target antigen, and AAY91221-Y91222 comprise the CS antigen and an MVF Th epitope and may be used in a malaria vaccine. CAAY91228-Y91231 represent CETP-derived peptides and AAY91232-Y91241 are CC AAY9128-Y91231 represent CETP-derived peptides and AAY91232-Y91241 are CC AAY9128-Y91257 are HIV-1 neutralising B-cell epitopes, and AAY91248-CC and AAY91258-Y91273 are antigenic peptides comprising MVH Th and CC HIV-1 B-cell epitope which may be used as a component in an anti-HIV-1 crassin protein epitope from Yersinia species, and hinge spacer peptide, coth of which may optionally be used in the antigenic peptides of the coth of which may optionally be used in the antigenic peptides of the correction. (Updated on 12-SEP-2003 to standardise OS field)
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Helper T cell epitope; F protein; Measles virus; peptide immunogen; LHRH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide immunogen comprising a Th epitope and LHRH target antigen.
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                                Misc-difference
                                                                                            Misc-difference
                                                                                                                                                         Misc-difference
                                                                                                                                                                                                                   Peptide
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                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yersinia sp
Measles virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
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                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
   /label= Gly, Thr
                                                                                                                                                                                      note=
                                                                                                                                                                                                                                                                                                             note= "invasin domain AAY68565"
                                                            label= Lys, Arg
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                                                                                                                                                                                                                                                   "spacer"
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Pred. No. 2.4e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hormone; spermatogenesis; ovulation;
sex hormone; promiscuous T helper epitope;
ne-dependent tumour; prostate cancer;
boar taint; meat quality; invasin domain;
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                                                                                                                                                                                      epitope AAY68542"
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Search completed: February

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2005,

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TAKSKKFPSYTATYQFGGIXEIXXVIVXXIEXIGGEHWSYGLRPG

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                                                                                                                                                                                The present sequence represents a peptide immunogen comprising an invasin colomain immunostimulatory peptide of Yersinia sp., a synthetic helper T CC cell (Th) epitope and a target antigen, luteinising hormone-releasing commone (LHRH). The synthetic Th epitope is derived from a structured complete antigen library (SSAL) designated SSAL1 Th1. SSAL Th1 is compared to the complete synthetic antigen library (SSAL) designated SSAL1 Th1. SSAL Th1 is compared to the compared to th
                                                  Matches
                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New peptide immunogen containing luteinizing hormone-releasing antigen site and helper T cell epitope, for e.g. contraception treatment of cancer.
                                                                                                                                               Sequence 45 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 9; Page 69; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UNBI-) UNITED
                                                                         Local
                                               36;
                                                                           Similarity
TAKSKKFPSYTATYOFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45
                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BIOMEDICAL INC
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                                                     Score 199; DB 3;
Pred. No. 8.5e-21;
3; Mismatches 6
                                                                                                  Length 45;
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Minimum DB
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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243
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78.121 Million cell updates/sec
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1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*

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Copyright (c) 1993 - 2005 Compugen Ltd.
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US-08-446-692-33

US-08-488-351A-32

US-09-100-414B-45

US-09-303-323-45

US-09-770-014-45

US-09-770-014-57

US-09-100-414B-57

US-09-303-323-57

US-09-770-014-57

US-09-770-014-52

US-09-770-014-52

US-09-770-014-52

US-09-770-014-52

US-09-770-014-63

US-09-770-014-63

US-09-770-014-66

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	Query Ma Best Loo Matches	INFORMATION SEQUENCE ( LENGTH: TYPE: TYPE: TOPOLOG: MOLECULE ( -08-446-692-)	TELE TE TE	ATTO NA	CURR AF	SC	COME MEME	រីបូន្ធប	STATE	TITI	APPI APPI	4 5 11 13	RESULT 1		444	44	4 4 6	3 3 3 9 8 7	ა ა 6 წ	 	3 2 2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3
1 77	Match Local Simi	NFORMATION F SEQUENCE CH LENGTH: TYPE: am TYPE: TY TOPOLOGY: MOLECULE TY MOLECULE TY	REFERENCE/DOLLECOMMUNICAT TELEPHONE: TELEFAX: (5)	CLASSIFICATI ATTORNEY/AGENT NAME: Maria REGISTRATION	FLICATI	ERATING FTWARE	UTER RE	STATE: NE	ADDRESSEE: STREET: 3	E OF IN	APPLICANT: APPLICANT: APPLICANT:	-692-: e 33, e 33, No. 5	_	_	156.5	156	169.5	180	187 187	187	187	203 187	3
TAKSKKFPSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 	nilarity Conserva	O <4 4 0	CKE1 ION (212	PICATION: 424 AGENT INFORMA Maria C.H. Li	CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/4 FILING DATE: 7-JUN-1995	SYSTEM:	READABLE FORM:	3 8	345 Park	TITLE OF INVENTION: NUMBER OF SEQUENCES:	Ladd, A Wang, C Zamb, I	) \pplicat \9551 MATION:			444	- 55	5 6	440	7.	77.0	<b>"</b> "	77.0	•
TATYQFG         TATYQFG	100.0 100.0 ative	ID NO: NISTICS: NO acids d r ptide	' NUMBER: 11 INFORMATION: )415-8745 51-6849	N: 424 INFORMATION C.H. Lin NUMBER: 29	DATA: R: US/ UN-1995	PC-DOS/MS- In Release	FORM: oppy dis		.H.	and s	Anna Chang Yi Timothy	ion US/(			44.10	4 60 4	9 69 9	ա տ տ	φφ	494	יטם	9 9 7	,
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SVIVHRLI         SVIVHRLI	Score 243; Pred. No. 2; Mismatches		-4146 US		692	o, Ver				ic unive		N		ALIGNMENTS	B-488-3 B-446-6	8-488-3	8-488-3	8-486-6 8-488-3	9-701-5 9-701-5	-09-770-014-58 -09-770-014-62	9-303-3	9-701-5 9-100-4	
EGVGGEHV	DB 1		83			sion #1				real i		,		rs	51A-34 92-32	51A-36	51A-37 92-36	92-55 51A-55	88C-58 88C-62	14-58	23-58	14B-58	
ASYGLRP         ASYGLRP	; Length 8; 0; Indel					. 25				immune s													
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	Gaps									for						• •		• •	• •	58,	• •		
	0,									vaccines					Appl Appl Appl	Appl	App1 App1	Appl Appl	Appl Appl	Appl Appl	Appl Appl	Appl Appl	

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US-09-100-414B-45
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                             Sequence 45, Application US/09100414B
Patent No. 6025468
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOZENS
NUMBER OF SEQUENCES: 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-488-351A-33
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APPLICATION NUMBER: US 08/229,2/3
FILING DATE: 14-APR-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
TROCTFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (516) 751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 45 amino acids
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APPLICANT: Ladd, Anna
APPLICANT: Ladd, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Wang, Chang Yi
ITITLE OF INVENTION: Inmunogenic LHRH peptide constructs
ITITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
UNUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
ADDRESS:
ADDRESS:
Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 424
PRIOR APPLICATION DATA:
PRIOR TOWNTON NUMBER: US 08/229,275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPUTEN: DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
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                                                                                                                                                                                                                                     TAKSKKÉPSYTATYOFGGLSEIKGVIVHRLEGVGGEHWSYGLRÉG 45
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100.0%; Pred. No. 2.3e-28;
tive 0; Mismatches 0;
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                                                                                                                                                                              COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
COMPUTER: WORD PC WINDOWS
SOFTWARE: WORD 97
CURRENT APPLICATION DATA:
**DOI'TCATION NUMBER: US/09/303,323
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                                                                      APPLICATION NUMBER: US/09/303,32
FILING DATE: 30-APR-1999
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEDY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 95./
Best Local Similarity 91.1
Matches 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 6228987
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TOTAL
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SEQUENCE CHARACTERISTICS:
LENGTH: 45 amino acids
TYPE: amino acid
TOPOLOGY: linear
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: MARIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                   NAME: Maria H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 11
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                                                                 NAME:
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OPERATING SYSTEM: PC WINGOWS
SOFTWARE: WOR'D 97
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
CURRENT APPLICATION NUMBER: US/09/100,414B
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MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 20-JUN CLASSIFICATION: 42.
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6228987
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                1151-4157
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Pred. No. 3.4e-27;
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Length 45; Indels

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Gaps

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Matches Query Match Best Local :

Local

RESULT 3

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RESULT 6
US-09-701-588C-45
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US-09-770-014-45
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                                                                                                                                                                                            JS-09-770-014-45
                                                                                                                                                                                                      TELEPHONE: 212-758-4800
TELEPAX: 212-751-6849
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 45 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                              Matches
                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. 6559282
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: Maria H. Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: WORD 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              / Match 96.7%;
Local Similarity 91.1%;
nes 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 45 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: New York
STATE: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE:
                                                                                                                              41;
                                                          h 96.7%;
Similarity 91.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAKSKKFPSYTATYQFGGISEIKGVIVHKIEGIGGEHWSYGLRPG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAKSKKFPSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09770014
                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  I: Floppy disk
IBM PC compatible
SYSTEM: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212-758-4800
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                                                                                                                         Score 235; DB 4; Length 45; Pred. No. 3.4e-27; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 235; DB 3;
Pred. No. 3.4e-27;
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                                                                                                                         0
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                                                                                                                           0
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TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 45:
US-09-701-588C-45
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                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-446-692-40
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 40, App. No. 575955
                                                                                                                                                                                                                                                                                                              Patent No. 5759551
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL WANG, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 96.7%;
Best Local Similarity 91.1%;
Matches 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 45, Application US/09701588C Patent No. 6713301
GENERAL INFORMATION:
COLUMNERY: US
COLUMNERY: US
ZIP: 10154-0053
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4158PC1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
LENGTH: 45 amino acids
                                                                                                                                                                                 NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS: Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC WINDOWS
SOFTWARE: WORD 97
CURRENT APPLICATION NUMBER: US/09/701,588C
FILING DATE: 29-No. 6713301-2002
                                                                                                                                                                CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: Maria H. Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: UNITED BIOMEDICAL INC., ET AL.
TITLE OF INVENTION: ARTIFICIAL T HELPER CELL
EPITOPES AS IMMUNE STIMULATORS FOR SYNTHETIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TAKSKKFPSYTATYQFGGLSBIKGVIVHRLBGVGGBHWSYGLRPG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAKSKKFPSYTATYQFGGISEIKGVIVHKIEGIGGEHWSYGLRPG 45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08446692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 10154-0054
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 235; DB 4;
Pred. No. 3.4e-27;
4; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ET AL.
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ATTORNEY/AGENT INFORMATION:

CLASSIFICATION:

NAME: Maria C.H. Lir REGISTRATION NUMBER;

Lin

29, 323

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/(
FILING DATE: 7-JUN-1995

US/08/446,692

OPERATING SYSTEM:

PatentIn

PC-DOS/MS-DOS n Release #1.0, Version #1.25

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Query Match
Best Local Similarity 84.00
Watches 39; Conservative
                                                       NAME/KEY: Modified-site
LOCATION: 34
OTHER INFORMATION: /note="L0.25;10.25;V0.25;F0.25"
;-08-446-692-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 46 amino acids
TOPOLOGY: linear
MOLECTHE TUPE: TOPOLOGY: linear
                                                                                                                                                                                                                 FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                      FEATURE:
NAME/KEY: Modified-site
LOCATION: 28
OTHER INFORMATION: /note="L0.25;10.25;V0.25;F0.25"
                                                                                                                                   NAME/KEY: Modified-site
LOCATION: 32
OTHER INFORMATION: /note="E0.50;D0.50"
FEATURE:
                                                                                                                                                                                                                                                                FEATURE:
NAME/KEY: Modified-site
                                                                                                                                                                                               OTHER INFORMATION:
                                                                                                                                                                                                                                           OTHER INFORMATION: /note="K0.50;R0.50"
                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: Modified-
LOCATION: 27
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
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OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OLECULE TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: /note="L0.25;10.25;V0.25;F0.25"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: Modified-site LOCATION: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: 22
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: Modified-site LOCATION: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: Modified-site
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NTHER INFORMATION: /note="D0.50;E0.50"
                                                                                                                                                                                                                    Modified-site
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           89.1%; Score 216.5; DB 1
84.8%; Pred. No. 1.8e-24;
tive 6; Mismatches 0
                                                                                                                                                                                    /note="L0.25;I0.25;V0.25;F0.25"
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="K0.50;R0.50"
                                                                                                                                                                                                                                                                                                                                                                                                     /note="L0.25;I0.25;V0.25;F0.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="L0.25;I0.25;V0.25;F0.25"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="E0.50;D0.50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1151-4146 US2
                                 DB 1; Length 46;
              <u>,</u>
           Indels
        1;
       Gaps
    1;
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REFERENCE/DOCKET NUMBER: 1151
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 46 amino acids
TYPE: amino acids
TYPE: amino acids
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-488-351A-40
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ZIP: 10154-0053
COMPUTER READABLE FORM:
MEDIUM TYPE: Flappy disk
MEDUTER: IRM PC compatible
TYSTEM: PC-DOS/MS-DOS
T-1-2888 #1.0, 1
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                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPUTER: OPERATING SYSTEM: PC-DOS/MS SOFTWARE: Patentin Release CURRENT APPLICATION NUMBER: US/08/
APPLICATION NUMBER: US/08/
TTMG DATE: 7-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 7-UNBER: US 08
                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                 MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
OTHER INFORMATION: /note="L0.25;10.25;V0.25;F0.25"
                                                                   LOCATION: 22
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 27-APR-
                                                                                     NAME/KEY: Modified-site LOCATION: 22
                                                                                                                                                                                NAME/KEY: modified-site
LOCATION: 19
OTHER INFORMATION: /note="D0.50;E0.50"
                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 7-JUN-1995
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
US 08/229,275
                                                                                                                  OTHER INFORMATION: /note="L0.25;10.25;V0.25;F0.25"
                                                                                                                                                              NAME/KEY:
                                                                                                                                                   OCATION
                                                                                                                                                                                                                                                                                                                                                                                          NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 0
FILING DATE: 14-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TAKSKKFPSYTATYQFGG-LSEIKGVIVHRLEGVGGEHWSYGLRPG
|||||||||||||||
1 TAKSKKFPSYTATYQFGGDLSELKGLLLHKLEGLGGEHWSYGLRPG
                                      Modified-site
                                                                                                                                                   Modified-site
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang, Chang Yi
Zamb, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-APR-1992
                                                                /note="E0.50;D0.50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 08/057,166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/488,351A
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FEATURE:
NAME/KEY:
LOCATION:

Modified-site

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RESULT 9
US-09-100-414B-57
; Sequence 57, Application US/09100414B
; Patent No. 6025468
; Patent No. 1025468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                     ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC Windows
SOFTWARE: WOR'D PC
SOFTWARE: WOR'D PC
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,414B
FILING DATE: 20-JUNE-1998
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Wang, Chang vi
TITLE OF INVENTION: NOVEL LARH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: /note="L0.25;I0.25;V0.25;F0.25"
FEATURE:
NAME/KEY: Modified-site
LOCATION: 30
OTHER INFORMATION: /note="K0.50;R0.50"
FEATURE:
NAME/KEY: Modified-site
ATTORNEY/AGENT INFORMATION:
NAME: MAXIA H. LIN
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: /note="L0.25;10.25;V0.25;F0.25" FEATURE:
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LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: Modified-site
LOCATION: 34
OTHER INFORMATION: /note="L0.25;10.25;v0.25;F0.25"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: 32
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: 31
OTHER INFORMATION: /note="L0.25;10.25;V0.25;F0.25"
                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: Modified-site LOCATION: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: /note="K0.50;R0.50"
                                                                                                                                                                                                                                                                                            CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                similarity 84.8%;
                                                                                                                                                                                                                                                                           ¥
                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="E0.50;D0.50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="L0.25;I0.25;V0.25;F0.25"
   1151-4157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 216.5; DB 2;
Pred. No. 1.8e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 46;
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                                                                                                                           ; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-303-323-57
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US-09-303-323-57
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                                                              Matches
                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No. 6228987
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
NUMBER OF SEQUENCES: 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: US...
ZIP: 10154-0054
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
OCMPUTER: IEM PC Compatible
OCMPUTER: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 49 amino acids
                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 49 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 09/10/
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: Maria H. Lin
REGISTRATION NUMBER: 29,3:
                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compat
OPERATING SYSTEM: PC W:
SOFTWARE: Word 97
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 30-AP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 345 Par
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 83.7
nes 41; Conservative
                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE:
1 TAKSKKFPSYTATYQFGG--LSEIKGVIVHRLEGV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAKSKKPPSYTATYQFGGISISEIKGVIVHKIEGILFGGEHWSYGLRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/09303323
                                                                                                                                                                                        49 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                               JMBER: US/09/303,323
30-APR-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87.7%;
                                                                           87.7%;
                                                                                                                                                                                                                                                                                                                                                                  09/100,414
                                                                                                                                                                                                                                                                                                     29,323
                                                                                                                                                                                                                         57:
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                                                                                                                                                                                                                                                                                       1151-4157
                                                                           Score 213; DB 3;
Pred. No. 6.3e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 213; DB 3;
Pred. No. 6.3e-24;
4; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGEHWSYGLRPG 45
                                                                                            Length 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 49
                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                             4,
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                                                             Сарв
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RESULT 11 US-09-770-014-57

APPLICANT: Wang,

STREET: 345 Pa CITY: New York STATE: NY

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Sequence 57, Application US/09701588C

Sequence 57, Application US/09701588C

Patent No. 6713301

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
ARTIFICAL INC., ET AL.
TITLE OF INVENTION: ARTIFICIAL T HELPER CELL
EPTIDES AS IMMUNE STIMULATORS FOR SYNTHETIC
EPTIDE IMMUNOGENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: 212-758-4800
TELEPAX: 212-751-6849
INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 49 anino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
2IP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: MATIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-41:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 57, Application US/09770014 Patent No. 6559282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTED.

OPERATING SYSTEM: PC WINGUMS
SOFTWARE: WORD 97
CURRENT APPLICATION DATA:
CURRENT APPLICATION UMBER: US/09/770,014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Worgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH
TITLE OF INVENTION: IMMINOGENS
                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC Windows
SOFTWARE: Word 97
                                                                                                                                                                                 NUMBER OF SEQUENCES: 151
CORRESPONDENCE ADDRESS:
ADDRESSEE: MOGGAN & Finnegan, L.L.P.
STREET: 345 Park Avenue
CITY: New York
                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87.7%;
83.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 213; DB 4;
Pred. No. 6.3e-24;
4; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1151-4157
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                              US-09-100-414B-52
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  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-701-588C-57
                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA.
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
ACMPUTER: IBM PC compatible
COMPUTER: TYPEM: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 52, Application US/09100414B Patent No. 6025468
                                                                                                                                  TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 45 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 87.7%;
Best Local Similarity 83.7%;
Matches 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEPHONE: 212-751-6849
INFORMATION FOR SEQ ID NO: 57:
SEQUENCE CHARACTERISTICS:
LENGTH: 49 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
                                                                        TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: pepi
                                                                                                                                                                                                                                                                                                                           SOFTWARE: WORD 97
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/09/100,414B
FILING DATE: 20-JUNE-1998
CLASSIFICATION: 424
                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: MATIA H. LIN
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 111
                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 345 Par
CITY: New York
                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Morgan & Finnegan, L.L.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 57:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/701,588C
FILING DATE: 29-NO. 6713301-2002
CLASSIFICATION: -Unknown>
PRIOR APPLICATION NUMBER: 09/100,414
PILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    45 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Maria H. Lin
                                                                                                                                                                                                             212-758-4800
    86.8%;
Score 211; DB 3;
Pred. No. 1.1e-23;
                                                                                                                                                                                                                                                   1151-4157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 213; DB 4;
Pred. No. 6.3e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1151-4158PC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                Length 45;
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4

Gaps

N

TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-09-770-014-57

CLASSIFICATION:

Query Match Best Local Similarity

Matches

41; Conservative

RESULT 12 US-09-701-588C-57

COUNTRY: USA ZIP: 10154-0054

STATE:

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Matches

40; Conservative

2; Mismatches

**ب** 

Indels

0

Gaps

0

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SEQUENCE CHARACTERISTICS:
LENGTH: 45 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-09-303-323-52
                                                                                                                                                     Sequence 52, Application US/09770014
Patent No. 6559282
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Worgan & Finnegan, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 52, Application US/09303323

Patent No. 6228987

GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-09-770-014-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
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US-09-303-323-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 86.8%; Score 211; DB 3; Length 45; Best Local Similarity 88.9%; Pred. No. 1.1e-23; Matches 40; Conservative 2; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Ploppy disk
MEDIU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION UNMBER: 09/100,414
PILING DATE: 20-JUNB-1998
ATTORNEY/AGENT INFORMATION;
NAME: MARIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 212-758-48
TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO:
STREET: 3% CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Word 97
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/09/303,323 FILING DATE: 30-APR-1999 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 345 Pai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TAKSKKFPSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAKSKKFPSYTATYQFGGLTEIRTVIVTRLETVGGEHWSYGLRPG 45
                                                                                                                              345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
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SEQUENCE CHARACTERISTICS:
LENGTH: 45 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-09-770-014-52
   멼
                                                                      Query Match 86.8%;
Best Local Similarity 88.9%;
Matches 40; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: US..
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
TYPEM: PC Windows
                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: Maria H. Lin
REGISTRATION NUMBER: 25,323
REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                      TELEPHONE: 212-758-48
TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC COMPAI
OPERATING SYSTEM: PC W:
SOPTWARE: Word 97
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/770,014 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
212-751-6849
                                                                                                                                                                                                                                                        52:
                                                                        2
                                                                                         Score 211; DB 4;
Pred. No. 1.1e-23;
                                                                      Mismatches
                                                                                                      Length 45;
                                                                        Indels
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Search completed: February Job time : 44 secs 8, 2005, 17:34:37

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Regult
No.
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM protein - protein search, using sw
          110
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                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq length: 0
seq length: 2000000000
                          84
84
79
79
                                                                                                                                                                                                                                                                                                                                                                                                                                              Published Applications AA:*

1: /cgn2=6/ptodata/2/pubpaa/US07 PUBCOMB.pep:*

2: /cgn2=6/ptodata/2/pubpaa/US06 NEW PUB.pep:*

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19: /cgn2=6/ptodata/2/pubpaa/US10 NEW PUB.pep:*
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Match
                                                              100.0
64.6
64.6
47.7
34.6
34.6
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243
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114.505 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1373511 seqs, 325702437 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                              Length
      GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                  B
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15
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        10
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                    4 US-10-076-674-9
4 US-10-076-674-8
4 US-10-076-674-8
5 US-10-355-161A-8
5 US-09-848-834A-9
5 US-09-848-834A-17
6 US-09-848-834A-17
7 US-09-848-834A-17
8 US-10-296-734-1467
8 US-10-296-734-1467
8 US-10-286-734-1467
8 US-10-351-641-505
9 US-10-267-682-105
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Sequence 9, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 9, Appli
Sequence 17, Appl
Sequence 17, Appl
Sequence 1467, Appl
Sequence 72, Appl
Sequence 73, Appl
Sequence 105, Appl
Sequence 105, Appl
Sequence 105, Appl
                                                                                                                                                                                                                                                                              Description
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14
69	69	69	69	69	69	69	69	70	70	70	71	71	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	79	79
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-09-964-201A-3	-09-964-2	-10-789-619-	-09-865-294-	-747-802-	9-619-	US-09-865-294-29	7-802-	9-75	3-60	-10-223-71	2-122	-10-358-083-	占	-09-951-061A	10-267-748-9	67-682-9	3-6	US-10-351-641-1148	US-09-848-834A-8	S-10-782-234-	-10-789-61	-619-	-10-261-445B	US-10-411-544-10	-10-261-446-	-09-865-294-2	-09-865	US-09-747-802-30		09-873-233A-	-V9-8/3-233A-1
equence	e 29,	e 48,	e 40,	æ	e 37,	e 29,	e 37,	e 33,	w	e 11,	e 45(	9	36, 1	e 141,	93,	O	Sequence 13, Appl	æ	Sequence 8, Appli	Sequence 20, Appl	Sequence 30, Appl	·O	e 20	e 10	e 20	e 22	e 8,	e 30	e 16	Sequence 20, Appl	Ψ,

## ALIGNMENTS

RESULT 1 US-10-076-674-9

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RESULT 2
US-10-35-161A-9
iS-10-35-161A-9
; Sequence 9, Application US/10355161A
; Publication No. US20040009897A1
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 9, Application US/10076674
Publication No. US20030165478A1
GENERAL INFORMATION:
APPLICANT: Sokoll, Kenneth K.
TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
FILE REFERENCE: Immunogen Delivery System
CURRENT APPLICATION NUMBER: US/10/076,674
CURRENT FILING DATE: 2002-04-23
NUMBER OF SEQ ID NOS: 11
SOUTWARE: Patentin version 3.1
SEQ ID NO 9
LENGTH: 45
                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 45; Conserv
APPLICANT: Sokoll, Kenneth K.
TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
FILE REFERENCE: Immunogen Delivery System
CURRENT APPLICATION NUMBER: US/10/355,161A
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Human
                                                                                                                                                                                                                                             1 TAKSKKFPSYTATYQFGGLSBIKGVIVHRLEGVGGEHWSYGLRPG 45
                                                                                                                                                                                                                                                                                                                                      100.0%; Score 243; DB 14; ilarity 100.0%; Pred. No. 3.3e-26; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                  Length
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' TYPE: PRT
' ORGANISM: Human
US-10-355-161A-8
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
US-10-355-161A-8
                                                                          Matches
                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 10/076674
PRIOR FILING DATE: 2002-02-14
NUMBER OF SEQ ID NOS: 13
SOFTWARE: Patentin version 3.1
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                               Sequence 8, Application US/10355161A Publication No. US20040009897A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                             APPLICANT: Sokoll, Kenneth K.
TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
FILE REFERENCE: Immunogen Delivery System
CURRENT APPLICATION NUMBER: US/10/355,161A
CURRENT FILING DATE: 2003-01-31
                                                                                                                                                                                 LENGTH:
1 TAKSKKFBSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45
                                                             :ch 64.6%; l Similarity 66.7%; 30; Conservative
                                                                                                                                                                                    45
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                                                   Score 157; DB 15;
Pred. No. 3e-14;
3; Mismatches 12;
                                                                           DB 15; Length 45;
                                                   Indels
                                                °,
                                            Gaps
                                           0;
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amino acid sequence 1-10 of the Gn

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APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION UNMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
ORDINATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
                                                                                                                                                                                                                                                                                                                                                                                     US-09-848-834A-17
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                                                                                                                           SOFTWARE: Patentin version 3.0 SEQ ID NO 17
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                                                                                                                                                                                                                                                                                                                     Sequence 17, Application US/09848834A patent No. US20020076416A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                              TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Chimeric peptide consisting of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Chimeric peptide made up of amino acid sequence 288-302 of the Me
OTHER INFORMATION: asels virus fusion protein, F linked by a spacer peptide to amino
OTHER INFORMATION: acid sequence 2-10 of the GnRH hormone
LCCATION: (1)...(1)
OTHER INFORMATION: Amidated Lysine
NAME/KEY: PEPTION:
NAME/KEY: PEPTION:
NAME/KEY: PEPTION: (1)...(15)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-848-834A-9
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SEQ ID NO 9
LENGTH: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: MOD RES
LOCATION: (31)...(31)
OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: (23)...(31)
OTHER INFORMATION: Peptide corresponds to amino acid sequences 2-10
OTHER INFORMATION: GARH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: PEPTIDE: ""CASHES VITUS LOCATION: (19). (22) OTHER INFORMATION: Spacer peptide NAME/KEY: PEPTIDE LOCATION: (23)...(31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
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Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (1)..(15)
OTHER INFORMATION: Peptide corresponds to the amino acid sequences 288-302 of the OTHER INFORMATION: measles virus fusion protein, F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19 LSEIKGVIVHRLEGVGGE--HWSYGLRP 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 LŚEIKĠVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 85.7
24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAKSKKFPSYTATYQFGGFFLLTRILTIPQSLEGGEHWSYGLRPG
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85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 116; DB 9;
Pred. No. 9.7e-09;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
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Query Match

Best Local Similarity 66./%,

Matches 30; Conservative

64.6%; Score 157; DB 1. 66.7%; Pred. No. 3e-14;

DB 14; Length 45; 12;

Indels

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Gaps

0

Mismatches

US-10-076-674-8

LENGTH: 45
TYPE: PRT
ORGANISM: Human

APPLICANT: Sokoll, Kenneth K.
TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
FILE REFERENCE: Immunogen Delivery System
CURRENT APPLICATION NUMBER: US/10/076,674
CURRENT FILING DATE: 2002-04-23
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PatentIn version 3.1

US-10-076-674-8

Sequence 8, Application US/10076674 Publication No. US20030165478A1 GENERAL INFORMATION:

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1 TAKSKKFPSYTATYOFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45

TAKŚKŔĖĖŠYTATYOFGGLSĖTKĠVTVHKLĖGVGGĖHWSYGLRĖG 45

US-10-355-161A-9

TYPE: PRT ORGANISM: Human

SOFTWARE: PatentIn version 3.1 SEQ ID NO 9 LENGTH: 45

CURRENT FILING DATE: 2003-01-31
PRIOR APPLICATION NUMBER: US 10/076674
PRIOR FILING DATE: 2002-02-14
NUMBER OF SEQ ID NOS: 13

Matches

45;

Conservative

0;

Score 243; DB 15; Pred. No. 3.3e-26; ); Mismatches 0;

Length 45; Indels

0

Gaps

0;

100.0%;

Query Match Best Local Similarity

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1 TAKSKKFPSYTATYQFGGLSEIKGVIVHRLEGVGGEHWSYGLRPG 45

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RESULT 8
US-10-296-734-1467
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                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Yersinia pseudotuberculosis
US-09-747-802-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-747-802-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-848-834A-17
                 Sequence 1467, Application US/10296734
Publication No. US20040054137A1
GENERAL INFORMATION:
APPLICANT: Thompson, Scott A
APPLICANT: Ramshaw, Ian A
TITLE OF INVENTION: Synthetic molecules and uses therefor
FILE REFERENCE: Savine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: WANG, CHANG YI
APPLICANT: WANG, CHANG YI
TITLE OF INVENTION: SYNTHETIC PEPTIDE COMPOSITION AS IMMUNOGENS:
TITLE OF INVENTION: PREVENTION OF URINARY TRACT INFECTION
FILE REFERENCE: 1151-4165
CURRENT APPLICATION NUMBER: US/09/747,802
CURRENT FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 88
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 72
                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 72, Application US/09747802 Publication No. US20030027979A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
CURRENT APPLICATION NUMBER: US/10/296,734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: PEPTIDE

IOCATION: (19)..(34)

COTHER INFORMATION: Amino acid sequence 288-302 of the Measles virus fusion protein,

NAME/KEY: REPTIDE

LOCATION: (35)..(38)

OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: PEPTIDE
LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)..(18)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 16
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: PEPTIDE LOCATION: (39)..(47)
OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: MOD_RES
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Amidated-glycine or glycinamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 288-302 of OTHER INFORMATION: the Measles virus protein F linked by a spacer to amino acid seq OTHER INFORMATION: uence 2-10 of the GRRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: MOD RES
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85.7%;
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100.0%; Pred. No. 0.0
tive 0; Mismatches
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Pred. No. 1.6e-08;
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0.00013
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; OTHER INFORMATION: US-10-411-544-32
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US-10-789-619-72
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                                                                                                        CURRENT APPLICATION NUMBER: US/10/411,544
CURRENT FILING DATE: 2003-04-10
NUMBER OF SEQ ID NOS: 52
SOFTWARE: PATENTIN VERSION 3.1
SEQ ID NO 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 72, Application US/10789619
Publication No. US20040141993A1
GENERAL INFORMATION:
APPLICANT: WANG, CHANG YI
TITLE OF INVENTION: SYNTHETIC PEPTIDE COMPOSITION AS IMMUNOGENS FOR
TITLE OF INVENTION: PREVENTION OF URINARY TRACT INFECTION
FILE REPERENCE: 1151-4165
CURRENT APPLICATION NUMBER: US/10/789,619
CURRENT APPLICATION NUMBER: 2004-02-27
NUMBER OF SEQ ID NOS: 88
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 72
                                                                                                                                                                                                                                                                                             Sequence 32, Application US/10411544 Publication No. US20030232758A1 GENERAL INFORMATION:
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Best Local Similarity
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PRIOR APPLICATION NUMBER: AU PQ7761/00
PRIOR FILING DATE: 2000-05-26
NUMBER OF SEQ ID NOS: 1507
SOFTWARE: PATENTIN VERSION 3.2
SEQ ID NO 1467
LENGTH: 16
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                                                                                                                                                                                                     TITLE OF INVENTION: Immunological Methods and TITLE OF INVENTION: Disease FILE REFERENCE: LI01547
                                                                                                                                                                                                                                                            APPLICANT: St. George-Hyslop, Peter APPLICANT: McLaurin, Joanne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT ORGANISM: Yersinia pseudotuberculosis
                                  ORGANISM: Artificial sequence FEATURE:
                                                                         TYPE: PRT
                                                                                       LENGTH:
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100.0%; pr
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; Pred. No. 0.0001;
0; Mismatches
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Query Match

34.6%; Score 84;

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15,

Length 25;

Best Local Similarity 100.0%; P Matches 17; Conservative 0;

Pred. No. 0.00021; Mismatches 0;

RESULT 11

PUBLICATION NO. US20030.
APPLICANT: Barney, S.
APPLICANT: Guthrie, K.

Guthrie, K. Merutka, G. Anwer, M.

В

Query Match Best Local S

Matches

COUNTRY: USA
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk

Page 4

NAME: COTUZZI, Laura A.
REGISTRATION NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 7872-029
TELECOMMUNICATION INFORMATION:

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NUMBER OF SEQ ID NOS: 32

SOPTWARE: Patentin Ver. 2.1

SEQ ID NO 18
LENGTH: 550
TYPE: PRT
ORGANISM: Measles virus
FEATURE:
FEATURE: UNSURE
LOCATION: (1)..(550)
OTHER INFORMATION: any n or Xaa = Unknown
US-09-873-233A-18
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TOPOLOGY: unknown
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MOLECULE TYPE: protein
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SEQUENCE DESCRIPTION: SEQ ID NO: 105:
US-10-267-748-105
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US-09-873-233A-20
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US-09-873-233A-18
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Sequence 20, Application US/09873233A
Patent No. US20020146434A1
GENERAL INFORMATION:
APPLICANT: UEDA, Shigeharu
APPLICANT: WATAWABE, Michiko
APPLICANT: KAWANISHI, Hitomi
TITLE OF INVENTION: GENE CODING FOR THE MEASLES VIRUS MUTANT ANTIGEN
FILE REFERENCE: 0216-0451P
CURRENT APPLICATION NUMBER: US/09/873,233A
CURRENT FILING DATE: 2001-06-05
NUMBER OF SEQ ID NOS: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 18, Application US/09873233A
Patent No. US20020146434A1
GENERAL INFORMATION:
APPLICANT: UEDA, Shigeharu
APPLICANT: WATANABE, Michiko
APPLICANT: KAMANISHI, Hitomi
TITLE OF INVENTION: GENE CODING FOR THE MEASLES VIRUS MUTANT ANTIGEN
FILE REFERENCE: 0216-0451P
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Best Local Similarity 70.8%;
Matches 17; Conservative
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Best Local Similarity 70.8
Matches 17; Conservative
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                                                                                                                                                                                                                                                                                                176 LSEIKGVIVHRLEGVSYNIGSQEW 199
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TELEFAX: (212) 869-9741/8864
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; SEQ ID NO 20
; LENGTH: 550
; TYPE; PRT
; ORGANISM: Measles virus
; FEATURE;
; NAME/KEY: UNSURE
; LOCATION: (1)..(550)
; OTHER INFORMATION: any n or Xaa = Unknown
US-09-873-233A-20
Query Match
Best Local Similarity 70.8%; Score 79; DB 9; Length 550;
Best Local Similarity 70.8%; Pred. No. 0.038;
Matches 17; Conservative 1; Mismatches 2; Indels 4; Gaps
Qy 1 LSBIKGVIVHRLEGV----GGEHW 38
Qy 1 LSBIKGVIVHRLEGV----GGEHW 38
Db 288 LSEIKGVIVHRLEGVSYNIGSQEW 311
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Search completed: February 8, 2005, 17:33:48
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Maximum Match 100%
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 length: 0
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1: uniprot_sprot:*
2: uniprot_trembl:*
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243
1 TAKSKKFPSYTATY(
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VGLP_MEASA
VGLP_MEASE
P90330
P90331
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Q68KG1
Q68KG1
Q68KG3
Q78482
Q78482
Q78482
Q90EW7
Q90EW8
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Q04243
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Q9QEX0
Q9QEX1
Q9WMK4
                                       Q9YJ94
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Q56889 yersinia (
Q56880 rinderpes)
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	ALIGNMENTS				
Q9ic36 measles vir	Q9IC36	N			45 7
Q83536 measles vir	Q83536	N	2.5 553	79 32	44 7
measles	Q83533	N			
measles	Q83530	N	Ġ		
measles	Q83527	ຎ	'n		
measles	Q83525	N	.5		
measles	Q83521	N	'n		
measles	Q83518 \	N			38 7
Q77m38 measles vir	Q77M38	N	'n		
Q77m34 measles vir	Q77M34	N			
measles	Q77M18	N	ភ		
Q91qp2 measles vir	Q91QP2	N	.5		
Q04244 measles vir	Q04244	N			
P88974 measles vir	P88974	N			

## SKER REPRESENTED TO THE PROPERTY OF THE PROPER EMBL; X53368; CAA37448.1; -. PIR; S11442; S11442. HSSP; PI1922; LCW. InterPro; IPR003344; Big 1. InterPro; IPR00335; Intimin. InterPro; IPR008964; Invasin\_intimin. Pfam; PF02369; Big 1; 1. PRINTS; PR01369; INTIMIN. SMART; SM00634; BID 1; 1. This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). P19196; 01-NOV-1990 01-NOV-1990 16-OCT-2001 -i- FUNCTION: Invasin is a protein that allows enteric bacteria penetrate cultured mammalian cells. The entry of invasin in cell is mediated by binding several beta-1 chain integrins. -i- SUBCELLULAR LOCATION: Outer membrane. -i- SIMILARITY: Belongs to the intimin/invasin family. STRAIN=8081C / Serotype O:8; MEDLINE=91041720; Pubmed=2233250; Young V.B., Miller V.L., Falkow S., S "Sequence, localization and function Yersinia enterocolitica."; Mol. Microbiol. 4:1119-1128(1990) SEQUENCE FROM N.A. Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Yersinia. Yersinia enterocolitica. Invasin. (Rel. (Rel. (Rel. 16, 40, Created) Last sequence update) Last annotation update) S., Schoolnik G.K.; ction of the invasin protein e £ the

Query Match Best Local S Matches 16

Similarity

34.6%;

Conservative

0;

Score 84; DB; Pred. No. 0.0

DB 1; 0.029;

Length 835; Indels

0

Gaps

0

718 TAKSKKFPSYTATYOF 1 TAKSKKFPSYTATYOF

733

Outer membrane. SEQUENCE 835

AA; 91361 MW;

6133FF9FDB8D9BBA CRC64;

RESULT 2 Q56889 ID Q568

Q56889;

PRELIMINARY;

PRT;

835

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Best Local S
Matches 16
                  SEQUENCE FROM N.A.

MEDIJINE=95088609; PubMed=7996154;
EVANS S.A., Baron M.D., Chamberlain R.W., Goatley L.,

"Nucleotide sequence comparisons of the fusion prote:

virulent and attenuated strains of rinderpest virus.

J. Gen. Virol. 75:3611-317(1994).
                                                                                                                                                                               Rinderpest virus (strain RBT1) (RDV).
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                                                                                                                            P41360; PKT; 546 AA.

01-FEB-1995 (Rel. 31, Created)
05-JUL-2004 (Rel. 44, Last annotation update)
Fusion 91ycoprotein precursor (Contains: Fusion Name-p.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GC:0007155; P:cell adhesion; IEA.
InterPro; IPR003344; Big 1.
InterPro; IPR003355; Intimin.
InterPro; IPR009864; Invasin_intimin.
Pfam; PF02369; Big 1; 1.
PRINTS; PR01369; INTIMIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-W1024;
STRAIN-W1024;
MEDLINE-98048470; PubMed-9387224;
A. Allaoui A., Campos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=94195100, PubMed=7511772; Pepe J.C., Badger J.L., Miller V.L.; "Growth phase and low pH affect the thermal regulation of the Yersinia Mol. Microbiol. 11:123-135(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=W1024;
MEDLINE=94195100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996
01-NOV-1996
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yersinia enterocolitica.
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Yersinia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Name=invA;
                                                                                                                                                                                                                                                                                                                                                                                                                       RINDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TAKSKKFPSYTATYOF 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h
Similarity 100.0%; Score 84;
16; Conservative 0; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAKSKKFPSYTATYOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   835 AA;
                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.
(TrEMBLrel.
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91367 MW;
           directs fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01,
01,
26,
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Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
      of viral and
                                                                              Goatley L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.0
BB
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.029;
                                                            ley L., Barrett T.
protein gene from
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                                                                                                                                                                                                                                                                                  glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 835;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
cellular
                                                                                                                                                                                                                                                                                     F2;
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RESULT A Q91HA5
ID Q9 1HA5
ID Q9 1HA5
AC Q9
DT Q1 01
DT 01
DT 01
DT 01
DT 01
DT 01
RP 02
RP RV II
RP RV NC
RR RV NC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM
STRAIN=K;
Ayanot P.K., S
Gusev A.A.;
Submitted (MA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local s
Matches 17
             Submitted (MAY-2001) to the EMBL/GenBank/DDBJ or similarity).

-!- SUBUNIT: Heterodimer of F1 and F2; disulficely:
-!- SIMILARITY: Belongs to the paramyxoviruses
                                                                                                                                                                                                                            Alanot P.K.,
Gusev A.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                            Q91HA5;
Q91HA5;
01-DEC-2001
01-DEC-2001
                                                                                                                                                              "Primary structure of the F-gene from Rinderpest virus strain K.";
                                                                                                                                                                                                                              MEDLINE=21014265; PubMed=11186456; Alanot P.K., Sminev A.G., Bezborodova
                                                                                                                                                                                                                                                                                                                     Viruseš; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11241;
                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                           STRAIN=K
                                                                                                                                                                                                                                                                                                                                                                                         Fusion protein.
Rinderpest virus.
                                                                                                                                                                                                                                                                                                                                                                                                                       01-DEC-2001 (TremBirel.
01-OCT-2003 (TremBirel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
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CHAIN
DOMAIN
TRANSMEM
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DOMAIN
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaborate between the Swiss Institute of Bioinformatics and the EMBL outstate the European Bioinformatics Institute. There are no restrictions on modified and this statement is not removed. Usage by and for commerciaties a license agreement (See http://www.isb-sib.ch/annour or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Envelope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ISSP; P04849; ISVF.
InterPro; IPR000776; Fusion gly.
Pfam; PF00523; Fusion gly; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               281 YPSLSEIKGVIVHRLEGVSYNIGSQEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31656; CAA83482.1; -. 847300; S47300.
                                                                                                                                                      FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17; Conservative
                                                                                                   Sminev A.G., Bezborodova S.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    546 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
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109
109
104
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514
57
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                                                                                                                                                                                                                                                                                                                                                                                                                       19,
19,
25,
                                           EMBL/GenBank/DDBJ databases.
F1 and F2; disulfide-linked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
                                                                                                                                                                                                                                                                                                                                                                                                       Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arg/Lys-rich (basic).
Linkage between F2 and F1 (Potential).
N-linked (GlcNAc...) (Potential).
N-linked (GlcNAc...) (Potential).
N-linked (GlcNAc...) (Potential).
O-linked (GlcNAc...) (Potential).
O-linked (Potential).
MW; 38B539B89344F401 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 80; DB
Pred. No. 0.06
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fusion glycoprotein F
Fusion glycoprotein F
Fusion glycoprotein F
Arg/Lys-rich (basic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Potential
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Paramyxoviruses fusion glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Glycoprotein;
                                                                                                                                                                                                                                s.v.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .064;
                                                                                                   Starov
                                                                                                                                                                                                                        Starov S.K.,
fusion glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 546;
                                                                                             S.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . F2.
                                                                                           Drygin
                                                                                                                                                                                                                  Drygin v.v.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Transmembrane.
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Best Local S
Matches 17
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Best Local S
Matches 17
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Q76R52;
05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P04849; 15Vr.
GO; GO:0019031; C:vtral envelope; IEA.
GO; GO:0006948; P:vtral-induced cell-c
Pfam; PF00523; Fusion_gly; 1.
Envelope protein; Fusion protein.
SEQUENCE 546 AA; 58571 MW; 449B2B2
                                                                                                                                                      VGLF_MEASY STANDARD; PRT; 534 AP
P26032;
01-MAY-1992 (Rel. 22, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation updat
                                                                                                             Fusion glycoprotein Fusion glycoprotein
                                                                                                                                                                                                                                                                     MEASY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000776; Pusion_gly.
Pfam; PF00523; Fusion_gly; I.
Envelope protein; Fusion protein.
SEQUENCE 531 AA; 57568 MW; AF0F45F7AD80D1D3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cattaneo R., Billeter M.A.; "Mutated and hypermutated go caused lethal human brain d. Virology 0:0-0(0).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AY035887; AAK63190.1;
PIR; PQ0866; PQ0866.
PIR; PQ0867; PQ0867;
PIR; PQ0873; PQ0873.
HSSP; P04849; 1SVF.
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                               virus).
                                                                    Measles virus (strain Yamagata-1)
                                                                                          Name=F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; ssRNA negative-strand viruses; Mononegavirales; Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Measles virus
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05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -!- SUBUNIT: Heterodimer of F1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=11234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fusion protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IL; X16568; CAA34582.1; -.
GO:0019031; C:viral envelope; IEA.
GO:0006948; P:viral-induced cell-c
                                                                                                                                                                                                                                                                                                                                                     288 LSEIKGVIVHRLEGVSYNIGSQEW 311
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                                                                                                                                                                                                                                                                                                                                                                                       19 LSEIKGVIVHRLEGV----GGEHW 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16 FGGLSEIKGVIVHRLEGV----GGEHW 38
                                                                                                                                                                                                                                                                                                                                                                                                                                           . Similarity
17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YPSLSEIKGVIVHRLEGVSYNIGSQEW 307
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                        precursor [Contains: Fusion F1].
                                                                                                                                                                                                                                                                                                                                                                                                                                                           32.5%;
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27,
27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            genes of persistent measles viruses which diseases.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 79;
Pred. No.
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Pred. No. 0.064;
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                                                               (Subacute sclerose
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                 Fusion
                                                                                                                                                                                                                                            ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    fusion;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 531;
                                                                                                                                 glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
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Best Local (
                                                                                                                                                                                                                                                                                              Q04243;
Q04243;
01-NOV-1996
01-NOV-1996
01-JUN-2003
                                                                                                                                                                                                    Fusion protein.
Measles virus.
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                           caused lethal human brain Virology 0:0-0(0).
-i- SUBUNIT: Heterodimer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
TRANSMEM
DOMAIN
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TRANSMEM
                                                                                                Cattaneo R., Billeter M.A., "Mutated and hypermutated g caused lethal human brain d
                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
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CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Komase K., Haga T., Yoshikawa Y., Sato T.A., Yamanouchi "Molecular analysis of structural protein genes of the Y strain of defective subacute sclerosing panencephalitis Nucleotide sequence of the fusion gene.";
Virus Genes 4:173-181(1990).
                                                                                                                                                                                              NCBI_TaxID=11234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; D10548; BAA01405.1;
HSSP; P04849; 1SVF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
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Envelope protein; Fusion p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -i- SUBUNIT: Heterodimer of F1 and F2; disulfice-i- SIMILARITY: Belongs to the paramyxoviruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=11239;
[1]
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                      similarity).
SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             family.
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17; Conserv
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                      Belongs
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                                                             of.
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diseases.
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Last sequence update)
Last annotation updat
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Fusion glycoprotein F
Fusion glycoprotein F
Potential.
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N-linked (GlcNAc. ..) (Potential)
N-linked (GlcNAc. ..) (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 79; I
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Potential.
Potential.
Cytoplasmic (Potential).
Linkage between F2 and F1 (Potential).
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                                                             and
                      paramyxoviruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F5B21757E643844D CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sato T.A., Yamanouchi K.;
protein genes of the Yamagata-1
                                                         F2;
                                                                                                    persistent .";
                                                                                                                                                                                                                                                                                                                                                                              534
                                                             disulfide-linked
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0.085;
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                                                                                                                      measles
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                    fusion glycoprotein
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                                                                                                                      viruses
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RESULT 9
Q04242
ID Q042
AC Q042
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DT 01-N
DT 01-J
DE Fusi
OS Meas
OC Viru
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RN [1]
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RP SEQU
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Q76R53
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Best Local S
Matches 17
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Cattaneo R., Billeter M.A.;

"Mutated and hypermutated genes of persis

caused lethal human brain diseases.";

Virology 0:0-0(0).

-!- SUBUNIT: Heterodimer of F1 and F2; di

similarity).

-!- SIMILARITY: Belongs to the paramyxovi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 17
                                                                                                                                                                                                                                                                                                     GO; GO:0019031; C:viral envelope; 1
GO; GO:0006948; P:viral-induced cel
InterPro; IPR000776; Fusion gly.
Pfam; PF00523; Fusion gly; T.
Envelope protein; Fusion protein.
SEQUENCE 534 AA; 57944 MW; 70D;
                                                                                                                                   Q04242
Q04242;
Q1-NOV-1996
   SEQUENCE FROM N.A. Cattaneo R., Billeter M.A., Mutated and hypermutated g
                                                     Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                  NCBI_TaxID=11234;
                                                                                    Measles virus
                                                                                                             01-NOV-1996
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; X16568; CAA34581.1; -.
HSSP, P04849; ISVF.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0006948; P:viral-induced cell-cel
InterPro; IRR000776; Fusion_gly.
Pfam; PF00523; Fusion_gly; 1.
Envelope protein; Fusion protein.
SEQUENCE 534 AA; 57900 MW; 637245E23
                                                                                                Fusion protein.
                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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L; X16567; CAA34575.1;
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                                                                                                                                                                                                                                                             l Similarity
17; Conserv
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                                                                                                                                                                                                                                LSEIKGVIVHRLEGV----GGEHW 38
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17; Conservative
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                                                                                                                                                        PRELIMINARY;
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27,
27,
    genes
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0 MW; 637245E23B5BE044 CRC64;
                                                                                                    Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                        the paramyxoviruses fusion glycoprotein
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Last sequence update)
Last annotation update)
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1; Mismatches
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Pred. No. 0.085;
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Pred. No. 0.08
1; Mismatches
                                                                                                                                                      PRT;
  of persistent
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cell-cell
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  measles
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viruses which
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RESULT 11
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ID VGLF_RINDR
AC P41356;
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QPPXAL

ID PQ9

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AC Q9

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Best Local S
Matches 17
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Best Local
                                                                                                                                                                                                                                                                                               InterPro; IPR000776; rusion
Pfam; PF00523; Fusion gly;
Pfam; Protein; Fusion pr
Envelope protein; Fusion pr
SEQUENCE 545 AA; 58907 N
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EMBL; AF179440; AAF02705.1; --
EMBL; AF179439; AAF02704.1; --
HSSP; P04849; ISVF.
GO; GO:0019031; C:viral envelope;
GO; GO:0006948; P:viral-induced co
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01-MAY-2000 (TrE
01-MAY-2000 (TrE
05-JUL-2004 (TrE
Fusion protein.
Measles virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ning X., Ayata M., Kimura M., Komase K., Furukawa K., Seto T., It
Shingai M., Matsunaga I., Yamano T., Ogura H.,
"Alterations and diversity in the cytoplasmic tail of the fusion
protein of subacute sclerosing panencephalitis virus strains iso
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=22072939; PubMed=12076836; DOI=10.1016/S0168-1702(02)00042-4;
Ninq X., Ayata M., Kimura M., Komase K., Furukawa K., Seto T., Ito N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. STRAIN=OSA-3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; ssRNA negative-strand viruses; Mononegavirales; Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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HSSP; P04849; 1SVF.
G0; G0:0019031; C:viral envelope; IEA.
G0; G0:0006948; P:viral-induced cell-cell fusion; IEA.
InterPro; IPR000776; Fusion gly.
Pfam; PF00523; Fusion gly; T.
Envelope protein; Fusion protein.
SEQUENCE 537 AA; 58275 MW; D0A60AC66D979E06 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=11234;
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-!- SIMILARITY: Belongs family.
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Virology 0:0-0(0).
-1-SUBUNIT: Heterodimer of F1 and F2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     similarity).
SIMILARITY: Belongs to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   us Res. 86:123-131(2002).
SUBUNIT: Heterodimer of F1
                                                                                                                           288 LSEIKGVIVHRLEGVSYNIGSQEW 311
                                                                                                                                                          19 LSEIKGVIVHRLEGV----
                                                                                                                                                                                                                           l Similarity
17; Conserv
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17; Conserv
                                                                                                                                                                                                                                                                                                                                                         IPR000776; Fusion_gly.
0523; Fusion_gly; 1.
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                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                              usion protein.
58907 MW; 02
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13,
27,
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                                                                                                                                                                         -GGEHW 38
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Pred. No.
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Pred. No. 0.08
1; Mismatches
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cell-cell fusion; IEA
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01-FEB-1995 (Rel. 31, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Pusion glycoprotein precursor [Contains: Fundate]
Pusion glycoprotein F1].
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              VGLF MEASA STANDARD; PRT; 550 AA. p35973; 91-JUN-1994 (Rel. 29, Created) 01-JUN-1994 (Rel. 29, Last sequence update) 05-JUL-2004 (Rel. 44, Last annotation update) 05-JUL-2004 (Rel. 44, Last annotation update) precursor (Contains: Fusion glycoprotein Fl].
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EMBL; Z30697; CAA83181.1; -.
PIR; S47305; S47305.
HSSP; P04849; ISVF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rinderpest virus (strain RBOK) (RDV).
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virulent and attenuated strains of rinderpest virus.";
J. Gen. Virol. 75:3611-3617(1994).
-!- FUNCTION: This protein directs fusion of viral and cellular
                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
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MEDLINE=95088609; PubMed=7996154;
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SUBUNIT: Het
SIMILARITY:
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 virus (strain AIK-C)
                                                                                                                                                                                                                                                     Similarity
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                                                                                                                                                                                                                                          Conservative
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Potential
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Pred. No. 0.087;
 (Subacute sclerose
                                                                                                                                                                                                                                                                                                          Arg/Lys-rich (basic).
Linkage between F2 and F1 (Potential).
N-linked (GlcNAc. . . ) (Potential).
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Best Local
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01-AUG-1988 (Rel. 08, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation updat
Fusion glycoprotein precursor (Contains: Fu
Fusion glycoprotein F1).
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   panencephalitis
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                                                            Measles virus
                                                                                                                   virus),
Measles virus
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MOOri T., Sasaki K., Hashimoto H., Makino S.;
"Molecular cloning and complete nucleotide sequence
the AIK-C strain of attenuated measles virus.";
Virus Genes 7:67-81(1993).
-!- FUNCTION: This protein directs fusion of viral a
                                                                                              virus),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
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HSSP; P04849; 1SVF.
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    -!- SUBUNIT: Heterodimer of Fl
    -!- SIMILARITY: Belongs to the

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NCBI_TaxID=36408;
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PR00523; Fusion gly; 1.
ope protein; Fusion protein;
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550 AA;
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      (strain
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                                                                                                                                                                                                                                    (strain Edmonston) (Subacute sclerose panencephalitis
                                                                                                                                                                          (strain Halle)
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F1).
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                                                                                                                   Leningrad-16) (Subacute sclerose panencephalitis
   Philadelphia-26)
                                                         Edmonston-Zagreb)
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N-linked
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Pred. No. 0.
                                                                                                                                                                          (Subacute sclerose panencephalitis
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Cytoplasmic (Potential)
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   (Subacute sclerose
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"The nucleotide sequence of the mRNA encoding the fusion protein of measles virus (Edmonston strain): a comparison of fusion proteins fr several different paramyxoviruses."; Virology 155:508-523(1986).
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the Euro
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MEDLINE=90085790; PubMed=2596022;
MEDLINE=90085790; PubMed=2596022;
Cattaneo R., Schmid A., Spielhofer P., Kaelin K., Baczko K.,
Meulen V., Pardowitz J., Flanagan S., Rima B.K., Udem S.A.;
"Mutated and hypermutated genes of persistent measles viruses
caused lethal human brain diseases.";
Virology 173:415-425(1989).
                                                                                                                                                                                                                   STRAIN=Philadelphia-26;
MEDLINE=94303181; PubMed=8030232;
Hummel K.B., Vanchiere J.A., Bellini W.J.;
"Restriction of fusion protein mRNA as a mechanism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J.
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MEDLINE=87071668; PubMed=3788062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Viruses; ssRNA negative-strand viruses; Mononegavirales; Paramyxoviridae; Paramyxovirinae; Morbillivirus. NCBI_TaxID=11235, 11236, 70147, 70149, 70148, 70146;
                                                                                                                                                                                                                                                                                                                                   STRAIN=Edmonston, Edmonston-Zagreb, and Leningrad-16; MEDLINE=94249283; PubMed=8191786; DDI=10.1016/0168-1702(94)90025-6; Rota J.S., Wang Z.D., Rota P.A., Bellini W.J.; "Comparison of sequences of the H, F, and N coding genes of measles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Buckland R., Gerald C., Barker R., Wild T.F.; "Fusion glycoprotein of measles virus: nucleotide and comparison with other paramyxoviruses."; J. Gen. Virol. 68:1695-1703(1987).
                                                                                                                             Submitted
                                                                                                                                          Billeter M.A.;
                                                                                                                                                   STRAIN=Edmonston
                                                                                                                                                                                                                                                                                                                                                                                                                                    measles virus."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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 ween the
European
                                                                                  SUBUNIT: Heterodimer of
                                                                      SIMILARITY:
                                                        family.
                                                                                                membranes.
                                                                                                             FUNCTION: This
                                                                                                                                                                                                                                                                                                         vaccine strains.";
Res. 31:317-330(1994).
                                                                                                                                                                                              202:665-672(1994).
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                                                                                                                         (OCT-1995) to the EMBL/GenBank/DDBJ databases
ROT entry is copyright. It is produced through a collaboration Swiss Institute of Bioinformatics and the EMBL outstation - Bioinformatics Institute. There are no restrictions on its
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RESULT
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Best Local
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EMBL; K05597; CAA29990.1; A
EMBL; K01711; AAA75499.1; A
EMBL; K01711; AAA75499.1; A
EMBL; U03659; AAA56647.1; A
EMBL; U03659; AAA56660.1; A
EMBL; U03670; AAA56660.1; A
EMBL; U03670; AAA565050.1; A
EMBL; U08416; AAA50550.1; A
EMBL; Z66517; CAA91367.1; A
EMBL; Z66517; CAA91368.1; -
EMBL; D63924; BAA0995
PIR; PQ0376; PQ0376.
HSSP; P04849; ISVF.
GO; GO:0019031; C:vir.
GO; GO:0006948; P:vir.
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or send a
                                                                                                                                                                                         Measles virus.
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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TRANSMEM
                                                                                       Sheng J., Nakanishi M., Submitted (AUG-1995) to
                                                                                                                                       Submitted
                                                                                                                                                                                      Paramyxoviridae;
NCBI_TaxID=11234;
                                                                                                                                                                                                                                       01-MAY-1997
01-OCT-2003
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DISULFID
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                                                                                                          STRAIN=Nagahata;
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                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                             Fusion protein.
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                                                          similarity).
SIMILARITY: Belongs
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                                        D63924; BAA09951.1;
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17; Conserv
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                                                                                                                                       Watanabe M.
(AUG-1995)
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 C:viral envelope; IEA.
P:viral-induced cell-cell
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the EMBL/GenBank/DDBJ databases
r of F1 and F2; disulfide-linked
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Last annotation update)
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Pred. No.
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Potential.
Cytoplasmic (Potential).
Linkage between F2 and F1 (Potential).
N-linked (GLCNAc. . . ) (Potential).
N-linked (GLCNAc . . ) (Potential).
N-linked (GLCNAc . . ) (Potential).
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RESULT 15
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01-MAY-1997
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                                                                                                                                                                                                                        EMBL; D63926; BAA09958.1; -.
EMBL; D63926; DAF02696.1; -.
PIR; P00376; P00376.
HSSP; P04849; ISVF.
G0; G0:0019031; C:viral envelope; IEA.
G0; G0:0019031; C:viral induced cell-cell fusion; IEA.
InterPro; IPRO00776; Fusion gly.
Pfam; PP00523; Fusion gly; I
Envelope protein; Fusion protein.
SEQUENCE 550 AA; 59530 MW; 97C991C7E2169839 CRC64;
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Pfam; PF00523; Fusion gly; T.
Envelope protein; Fusion protein.
SEQUENCE 550 AA; 59589 MW; 73E7BD457ABA39B7 CRC64;
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-i- SIMILARITY: Belongs to the paramyxoviruses fusion glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-22072939; PubMed=12076836; DOI=10.1016/S0168-1702(02)00042-4; Ning X., Ayata M., Kimura M., Komase K., Furukawa K., Seto T., Ito N., Shingai M., Matsunaga I., Yamano T., Ogura H.; "Alterations and diversity in the cytoplasmic tail of the fusion protein of subacute sclerosing panencephalitis virus strains isolated in Osaka, Japan."; Virus Res. 86:123-131(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=Nagahata;
Sheng J., Nakanishi M., Watanabe M., Ueda S.;
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
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Measles virus.
Viruses; asRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -1- SUBUNIT: Heterodimer of Fl and F2; disulfide-linked (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
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Local Similarity 70.8%;
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LSEIKGVIVHRLEGVSYNIGSQEW 311
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                                                                                                            32.5%; Score 79; DB 2; Length 550; 70.8%; Pred. No. 0.088; tive 1; Mismatches 2; Indels
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Search completed: February 8, 2005, 17:30:50 Job time : 174 secs

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Maximum Match 100%
Listing first 45 summaries Run on: OM protein - protein search, using sw Total number of hits satisfying chosen parameters: Scoring table: Sequence: Perfect score: Title: and is Pred. No. DB DB Score seq No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution. length: 0 length: 2000000000 Query Match PIR\_79:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\* BLOSUM62 US-10-076-674A-9 243 283416 seqs, 96216763 residues February 8, 2005, 17:19:57; Gapop 10.0 , TAKSKKFPSYTATYQFGGLS.....IVHRLEGVGGEHWSYGLRPG Copyright Length GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd. 멺 Gapext 0.5 S514212
S114212
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111.019 Million cell updates/sec 283416 cell fusion glycop cell fusion glycop gonadoliberin prec gonadoliberin prec cell fusion glycop cell fusion protei cell fusion protei cell fusion glycop cell fusion glycop cell fusion protei gonadoliberin prec gonadoliberin prec invasin - Yersinia cell fusion protei gonadoliberin prec invasin - Yersinia cell fusion protei pollen allergen ho gene protein - r gonadoliberin prec cellulase (EC 3.2. gonadoliberin - pi gonadoliberin - sh gene cell gene cell cell cell Description invasin - Yersinia invasin - Yersinia gene F protein - r fusion glycop
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A;Cross-references: UNIPROT:P19196; EMBL:X53368; NID:g48573; PIDN:CAA37448.1; PID:g48574 A;Experimental source: strain 8081c C;Genetics: A;Gene: invA C;Superfamily: invasin

A;Molecule type: DNA A;Residues: 1-835 <YOU> A;Cross-references: UNI

Query Match Best Local S Matches 16

l Similarity

Conservative

34.6%; Score 84; DB 2; Le 100.0%; Pred. No. 0.0097; ... Mismatches 0;

Length 835; Indels

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Gaps

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C;Species: Yersinia enterocolitica (C;Date: 21-Nov-1993 #sequence\_revision 10-Nov-1995 #text\_change 09-Jul-2004 C;Accession: S11442; S71023 R;Young, V.B.; Miller, V.L.; Falkow, S.; Schoolnik, G.K. Mol. Microbiol. 4, 1119-1128, 1990 A;Title: Sequence, localization and function of the invasin protein of Yersinia enterocol A;Reference number: S11442; MUID:91041720; PMID:2233250 A;Accession: S11442

RESULT 2 S11442

invasin - Yersinia enterocolitica

밁 8

1 TAKSKKFPSYTATYQF 16 ||||||||||||||| 718 TAKSKKFPSYTATYQF 73

733

Matches

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Query M	A; MCCEBSION: 504216 A; Molecule type: DNA A; Residues: 1-835 <f. 1="" a;="" c;="" cross-references:="" experimental="" gene:="" genetics:="" inva="" invas<="" sourc="" superfamily:="" td=""><td>Variety Date: 1 Accessi Fauconn bmitted Descrip</td><td>RESULT 1 S54216 invasin - C;Species</td><td></td><td>45</td><td>4 4 4 0</td><td>42</td><td>41</td><td>40</td><td>ນ ເ 0 8</td><td>37</td><td>36</td><td>ω 5</td><td>34</td><td>ω ( (</td><td>با بر خ د</td><td>30</td><td></td></f.>	Variety Date: 1 Accessi Fauconn bmitted Descrip	RESULT 1 S54216 invasin - C;Species		45	4 4 4 0	42	41	40	ນ ເ 0 8	37	36	ω 5	34	ω ( (	با بر خ د	30	
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Query Match Best Local Similarity	A;McJesulor: 554216 A;Molecule type: DAA A;Residues: 1-835 <fau> A;Cross-references: UNIPROT:Q56889; A;Experimental source: strain W1024 C;Genetics: A;Gene: invA C;Superfamily: invasin</fau>	A; Variety: strain W1024 C; Date: 10-Sep-1999 #sequence_revis C; Accession: S54216 R; Fauconnier, A., Allaoui, A.; van Rubmitted to the EMBL Data Library, A; Description: Clustering of flagel A; Reference number: S54213	RESULT 1 S54216 invasin - Yersinia enterocolitica C;Species: Yersinia enterocolitica		22.4	22.4	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	л г. О г.	24.7	
	PROT:C	equence oui, A. oui, A. Data Li ing of 4213	erocoli terocol		710	263	601	552	552	473 551	187	162	147	92	10	707	1085	
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່ ທ	: DNA 35 <faus 135 <faus BOURCE: STRAIN WI024; BEROTYPE O:9 invasin</faus </faus 	A;Variety: strain W1024 C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004 C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004 C;Accession: S34216 R;Fauconnier, A.; Allaoui, A.; van Elsen, A.; Cornelis, G.; Bollen, A. submitted to the EMBL Data Library, February 1995 A;Description: Clustering of flagellar genes around invA, the Yersinia enterocolitica invA, Reference number: S54213		ALI	E69665	T47536	D83583	B85489	B90638	T38350	T47342	T49957	A84546	I50644	RHAO1	139062 67777	T03531	
Pred. No. C	EMBL:248169; ; serotype 0:9	ion 10-Sep- Elsen, A.; February 1 lar genes a	(strain W1024)	al i gnments														
DB 1; 0.0097;	0:9 0:9	-Sep-1999 #text_change 09-Jul A., Cornelis, G., Bollen, A. ary 1995 nes around invA, the Yersinia	.4	u,														
Length 835;	NID:9793891; PIDN:CAA88188.1;	#text_change 09-Jul-2004 elis, G.; Bollen, A. d invA, the Yersinia ente																
835;	91, PII	hange   ; Boll the Ye			nitrate	hypothet	probable	probable	probable	vabN 1	hypot	ribos	50S r	gonad	gonad	CELLU	CODN	
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RESULT 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                     cell fusion glycoprotein - measles virus (strain TT) (fragment)
C;Species: measles virus
C;Date: 17-Apr-193 #sequence_revision 17-Apr-1993 #text_change 09-Jul-2004
C;Accession: PQ0376
R;Schulz, T.F.; Hoad, J.G.; Whitby, D.; Tizard, E.J.; Dillon, M.J.; Weiss, R.A.
J. Gen. Virol. 73, 1581-1586, 1992, D.; Tizard, E.J.; Dillon, M.J.; Weiss, R.A.
A;Title: A measles virus isolate from a child with Kawasaki disease: sequence comparison
A;Reference number: PQ0374; MUID:92300360; PMID:1607874
A;Accession: PQ0375
A;Accession: PQ0376
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C;Superfamil:
C;Keywords:
                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: genomic RNA
A;Residues: 1-282 <SCH>
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R;Chamberlain, R.W.; Wamwayi, H.M.; Hockley, E.; Shaila, M.S.; Goatley, L.; Knowles, N.J. Gen. Virol. 74, 2775-276, 1993  
A;Title: Evidence for different lineages of rinderpest virus reflecting their geographic A;Recession: PQ0865; MUID:94103786; PMID:8277286  
A;Accession: PQ0865  
A;Molecule type: mRNA  
A;Residues: 86-191 <CHA>
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R;Evans, S.A.; Barcn, M.D.; Chamberlain, R.W.; Goatley, L.; Barrett, T.
submitted to the EMBL Data Library, March 1994
A;Reference number: S47299
A;Reference number: S47299
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|Keywords: glycoprotein; membrane fusion; transmembrane protein
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                     fusion glycoprotein -
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17; Conser
                                                                                                                 LSEIKGVIVHRLEGVSYNIGSQEW 43
                                                                                                                                                     LSEIKGVIVHRLEGV----GGEHW 38
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                     measles virus
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Pred. No.
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Pred. No. 0.02
2; Mismatches
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                (strain
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                Schwarz
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          vaccine) (fragment)
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VONZRK

VONZRK

COLI fusion glycoprotein precursor - rinderpest virus (strain Kabete O)

C/Sontains: fusion glycoprotein F1; fusion glycoprotein F2

C/Species: rinderpest virus

C/Species: 31-Dec-1989 #sequence_revision 31-Dec-1989 #text_change 09-Jul-2004
            Wirology 166, 149-153, 1988
A;Title: Cloning of the fusion gene of rinderpest virus:
A;Reference number: A31051; MUID:88322864; PMID:3413983
A;Accession: A31051
  A;Molecule
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A; Residues: 1-534 < KOM>
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  type:
                                                                                                                                                                                                                                                                                                288
genomic RNA
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A;Cross-references: EMBL:p10548; NID:g222256; PIDN:BAA01405.1; PID:g222257 A;Note: the authors translated the codon GTA for residue 459 as Gly and GGC C;Genetics:

A;Gene: F
C;Generianily: parainfluenza virus cell fusion protein C;Superfamily: parainfluenza virus cell fusion; transmembrane protein F;1-22/Domain: signal sequence #status predicted <SIG>F;23-107/Product: cell fusion glycoprotein F2 #status predicted <FF2>F;108-534/Product: cell fusion glycoprotein F1 #status predicted <FF1>F;498-514/Domain: transmembrane #status predicted <FF1>F;498-514/Domain: transmembrane #status predicted <FF1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Molecular analysis of structural protein genes of the Yamagata-1 strain of A;Reference number: JU0274; MUID:90385702; PMID:1698327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Accession: JU0274
R;Komase, K.; Haga, T.; Yoshikawa, Y.; Sato, T.A.; Yamanouchi, Virus Genes 4, 173-181, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cell fusion glycoprotein precursor - subacute sclerosing panencephalitis virus (strain KyContains: fusion glycoprotein F1; fusion glycoprotein F2 C;Spacies: subacute sclerosing panencephalitis virus, SSPEV C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 16-Jun-2000
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C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 09-Jul-2004
C;Accession: PQ0388
R;Schulz, T.F.; Hoad, J.G.; Whitby, D.; Tizard, E.J.; Dillon, M.J.; Weiss, R.A.
J. Gen. Virol. 73, 1581-1586, 1992
A;Title: A measles virus isolate from a child with Kawasaki disease: sequence compariso, A;Reference number: PQ0374; MUID:92300360; PMID:1607874
A;Recession: PQ0388
A;Molecule type: genomic RNA
A;Residues: 1-282_<SCH>A;Residues: 1-282_<SCH
A;Residues: 1-282_<SCH
A;Resi
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C;Superfamily: parainfluenza virus cell fusion protein
C;Keywords: glycoprotein; membrane fusion
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                                                                                                                                                                                         l Similarity
17; Conserv
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Pred. No. 0.01
1; Mismatches
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(Asn) (covalent
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0.026;
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0.013;
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3

comparative

sequence

analysis

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R;MOT1, T.; Sasaki, K.; Hashimoto, H.; Makino, S.

Virus Genes 7, 67-81, 1993

A;Title: Molecular cloning and complete nucleotide sequence of genomic RNA of the AIK-C

A;Reference number: A48556; MUID:93227570; PMID:8470368

A;Accession: E48556

A;Molecule type: genomic RNA

A;Residues: 1-550 eMOR>

A;Cross-references: UNIPROT:P35973; GB:S58435; NID:g299460; PIDN:AAB26145.1; PID:g299465

A;Molecule type: genomic RNA

A;Mol
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C; Superfamily: parainfluenza virus cell fusion protein
C; Superfamily: parainfluenza virus cell fusion; transmembrane protein
C; Keywords: glycoprotein; membrane fusion; transmembrane protein
F; 11-19/Domain: signal sequence #status predicted <SIG>F; 129/Domain: signal sequence #status predicted <FF1>F; 109-108/Product: cell fusion glycoprotein F2 #status predicted <FF1>F; 109-546/Product: cell fusion glycoprotein F1 #status predicted <FF2>F; 109-134/Domain: transmembrane #status predicted <TN1>F; 491-513/Domain: transmembrane #status predicted <TN2>F; 491-513/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: measles virus
C;Date: 17-Feb-1994 #sequence_revision 17-Feb-1994
C;Accession: E48556
R;Mori, T.; Sasaki, K.; Hashimoto, H.; Makino, S.
Virus Genes 7, 67-81, 193
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C;Species: rinderpest virus
C;Date: 20-Oct-1994 #sequence_revision 08-Sep-1995 #text_change 09-Jul-2004
C;Accession: S47305; S47301
R;Baron, M.D.; Barrett, T.
submitted to the EMBL Data Library, March 1994
A;Description: The sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence of Rinderpest virus, and the sequence of the N and L genes of Rinderpest virus, and the sequence virus, and the sequence virus, and the sequence virus, and the sequence virus, and 
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A;Cross-references: UNIPROT:P12574
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:P41356; EMBL:Z30697; NID:g535396; PIDN:CAA83181.1; PID:g5354
C;Superfamily: parainfluenza virus cell fusion protein
C;Keywords: transmembrane protein
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A; Accession: $47305
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A; Residues: 1-546 < BAR>
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gonadoliberin precursor - mouse
N;Alternate names: gonadotropin-releasing hormone (GnRH); luteinizing hormone
N;Contains: gonadoliberin; gonadoliberin-associated protein (GAP)
C;Species: Mus musculus (house mouse)
C;Date: 31-Dec-1993 #sequence_revision 18-Mar-1997 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: mRNA
A;Residues: 1-553 <BUC>
A;Cross-references: UNIPROT:093055; GB:D00090; NID:g222061; PIDN:BAA00056.1;
A;Experimental source: strain Halle
A;Experimental source: strain Halle
A;Experimental source: strain Halle
Virology 155, 508-523, 1986
A;Title: The nucleotide sequence of the mRNA encoding the fusion protein of m
A;Reference number: A94350; MUID:87071668; PMID:3788062
A;Accession: A25616
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R;Schulz, T.F.; Hoad, J.G.; Whitby, D.; Tizard, E.J.; Dillon, M.J.; Weiss, R.A.
J. Gen. Virol. 73, 1581-1586, 1992
A;Title: A measles virus isolate from a child with Kawasaki disease: sequence comparison
                                                                                                                                                                    RESULT 11
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A;Residues: 272-553 <SCH2>
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A;Accession: PQ0380
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A;Residues: 272-553 <SCH1>
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A; Residues: 4-553 < RIC>
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Pred. No. 0.
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Pred. No. 0.027;
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A;Description: stimulates pituitary secretion of l A;Note: gonadoliberin-associated protein may have C;Superfamily: gonadoliberin C;Keywords: amidated carboxyl end; hormone; hypoth F;1-23/Domain: signal sequence #status predicted <
                                                                                                                                                          A; Introns: 47/3;
                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: mRNA
A;Residues: 1-92 <ADE>
A;Residues: 1-92 <ADE>
A;Cross-references: GB.M12579; NID:g204445; PIDN:AAA41263.1;
A;Cross-references: GB.M12579; NID:g204445; PIDN:AAA41263.1;
R;Maler, C.C.; Marchetti, B.; LeBoeuf, R.D.; Blalock, J.E.
Cell. Mol. Neurobiol. 12, 447-454, 1992
A;Title: Thymocytes express a mRNA that is identical to hypot
A;Reference number: A48410; MUID:93105480; PMID:1468115
                                                                                                                                                                                                             A; Note: sequence
                                                                                                                                                                                                                           A;Cross-references: GB:S50870; NID:g262059; PIDN:AAB24572.1; A;Experimental source: thymus
                                                                                                                                                                                                                                                                                      A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-92 <MAI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N;Alternate names: gonadoliberin-associated protein (GAP); gonadotropin releasing hormor N;Contains: gonadoliberin; prolactin release inhibiting factor C;Species: Rattus norvegicus (Norway rat) C;Date: 31-Mar-1988 #sequence revision 31-Mar-1988 #text_change 09-Jul-2004 C;Accession: A40147; B26173; A48410 R;Bond, C.T.; Hayflick, J.S.; Seeburg, P.H.; Adelman, J.P. Mol. Endocrinol. 3, 1257-1262 1989 Mol. Endocrinol. 3, 1257-1262 1989 A;Title: The rat gonadotropin-releasing hormone: SH locus: structure and hypothalamic ex A;Reference number: A40147; MUID:89384661; PMID:2476669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: UNIPROT:P07490; GB:M31670; NID:g204447; PIDN:AAA41264.1; R;Adelman, J.P.; Mason, A.J.; Hayflick, J.S.; Seeburg, P.H. Proc. Natl. Acad. Sci. U.S.A. 83, 179-183, 1986
A;Title: Isolation of the gene and hypothalamic cDNA for the common precursor A;Reference number: A94090; MUID:86094338; PMID:2867548
A;Accession: B26173
                                                                                                                                                                                                                                                                                                                                                                  A; Accession: A48410
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A; Residues: 1-92 <BON>
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C; Superf
C; Keywor
F; 1-23/D
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C;Function:
A;Description: gonadoliberin stimulates pituitary secretion
A;Note: gonadoliberin-associated protein may have prolactin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gonadoliberin precursor -
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                                                                                                                                                                                          ;Genetics:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-90 < MAS>
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Science 234, 1366-1371, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;1-23/Domain: signal sequence #status predicted <SIG>;2-31/Product: gonadoliberin #status predicted <GLB>;35-90/Product: gonadoliberin-associated protein #status predicted <GAP>;22-4Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predic;31/Modified site: amidated carboxyl end (Gly) (amide in mature form from following
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Best Local :
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Keywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid
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12; Conserv
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Pred. No. 0.01
1; Mismatches
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        hypothalamus; placenta; pyroglutamic acid;
                                                              of lutropin and follit
have prolactin release
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0.016;
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elease inhibiting
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C;Superfamily: parainfluenza virus C;Keywords: glycoprotein; membrane F;1-15/Domain: signal sequence #sta
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C;Accession: JQ2223
R;Visser, I.K.G.; van der Heijden,
R;Visser, I.K.G.; van der Heijden,
Tonn Virol. 74, 1989-1994, 1993
                                                                                                                                                                           A;Cross-references: UNIPROT:Q7LZY1; GB:L07075
A;Note: the authors translated the codon ATC
C;Comment: This fusion protein F0 is cleaved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell fusion protein F0 precursor - phocine distemper virus N;Contains: F1 and F2 chains C;Species: phocine distemper virus C;Species: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change
                                                                                                                              A;Gene:
                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-542 < VIS>
                                                                                                                                                                                                                                                                                                                                                                                             A; Reference number: JQ2223; MUID: 93389459; PMID: 8376973
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N;Contains: fusion glycoprotein F1; fusion glycoprotein
C;Species: rinderpest virus
C;Date: 30-Sep-1989 #sequence recific C;Accession: 1989 #sequence recific for the contact of the contact o
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   e virus entity.
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F;20-104/Product: cell fusion glycoprotein F2 #status predicted <F;105-546/Product: cell fusion glycoprotein F1 #status predicted F;105-546/Product: cell fusion glycoprotein F1 #status predicted F;109-133/Domain: transmembrane #status predicted <TNI>
F;485-513/Domain: transmembrane #status predicted <TNI>
F;25,57,63/Binding site: carbohydrate (Asn) (covalent) #status pr
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(,Superfamily: parainfluenza virus cell fusion protein C,Keywords: glycoprotein; membrane fusion; transmembrane fusion; transmembrane fusion; transmembrane fusion predicted cSIG>
F,1-19/Domain: signal sequence #status predicted cSIG>
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A;Residues: 1-546 <TSU>
A;Cross-references: UNIPROT:P10864; GB:M20870; NID:g333898;
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A;Accession: A28921
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F;24-33/Product: gonadoliberin #status predicted <GLN>
F;24-37/Product: gonadoliberin #status predicted <GLN>
F;37-92/Product: prolactin release-inhibiting factor #status predicted F;24/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form)
F;33/Modified site: amidated carboxyl end (Gly) (amide in mature form f
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12; Conserv
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Pred. No. 0.12;
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Pred. No. 0.01
1; Mismatches
                                                                    cell fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R.W.J.; van de Bildt, M.W.G.; Kenter, M.J.H.;
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   predicted
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Cell fusion protein precursor - porpoise morbillivirus

N.Alternate names: F protein

C;Species: porpoise morbillivirus

C;Cate: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 09-Jul-2004

C;Accession: S47034

R;Bolt, G.; Gottschalck, E.; Blixenkkrone-Moeller, M.; Wishaupt, R.G.A.; Welsh, M.J.; Easubmitted to the EMBL Data Library, July 1994

A;Description: Nucleotide sequence comparisons of the F and M genes of cetacean morbilling Reference number: S47034

A;Accession: S47034

A;Molecule type: mRNA

A;Residues: 1-552 <BOL>

A;Cross-references: UNIBROT:Q66147; EMBL:X80757; NID:g520639; PIDN:CAA56731.1; PID:g5206

A;Note: the source: isolate Ulster 88

A;Note: the source is designant and as Cetacean morbillivirus
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S47034
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F;16-99/Product: F2 chain #status predicted <F2C>
F;105-542/Product: F1 chain #status predicted <F1C>
F;105-135/Region: hydrophobic
F;486-512/Domain: transmembrane #status predicted <TMM>
F;21,53,59,397/Binding site: carbohydrate (Asn) (covalent) #status predicted
Search completed: February 8, 2005, 17:31:34 Job time : 40 secs
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Best Local Similarity 62:
Matches 15; Conservative
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                                                                                             290 LSEVKGVIVHRLEAVSYNLGSQEW 313
                                                                                                                          19 LSEIKGVIVHRLEGV----GGEHW 38
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Pred. No. 0.
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Pred. No. 0.22;
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